

UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR § 1.53(b))</i>		Attorney Docket No.		104248-5365-US	
		First Inventor		Jeffrey P. Mathews	
		Title		Apparatus and Method for Seamless Commissioning of Wireless Devices	
		Electronically filed		December 9, 2019	
APPLICATION ELEMENTS <i>See MPEP Chapter 600 concerning utility patent application contents.</i>				<i>Address to:</i> Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450	
1. ☐ Fee Transmittal Form <i>(with duplicate for fee processing)</i> 2. ☐ Applicant claims Small Entity status, see 37 C.F.R. § 1.27 3. ☒ Specification [Total Pages 20] 4. ☒ Drawing(s) (35 USC § 113) [Total Sheets 6] 5. ☒ Oath or Declaration [Total Pages 2] a. ☐ Newly executed <i>(original or copy)</i> b. ☒ Copy from a prior application (37 CFR § 1.63(d)) 6. ☒ Application Data Sheet, see 37 C.F.R. § 1.76 7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program <i>(Appendix)</i> ☐ Landscape Table on CD 8. ☐ Nucleotide and/or Amino Acid Sequence Submission <i>(if applicable, all necessary)</i> a. ☐ Computer Readable Form (CRF) b. ☐ Specification Sequence Listing on i. ☐ CD-ROM or CD-R (2 copies); or ii. ☐ Paper c. ☐ Statement verifying identity of above copies				ACCOMPANYING APPLICATION PARTS	
				9. ☐ Assignment Papers <i>(cover sheet & document(s))</i> Name of Assignee: 10. ☒ 37 CFR § 3.73(c) Statement a. ☒ Power of Attorney 11. ☐ English Translation Document <i>(if applicable)</i> 12. ☐ Information Disclosure Statement and PTO-1449 a. ☐ Copies of citations attached 13. ☐ Preliminary Amendment 14. ☐ Return Receipt Postcard <i>(MPEP 503)</i> 15. ☐ Certified Copy of Priority Document(s) <i>(if foreign priority is claimed)</i> 16. ☐ Non-Publication Request under 35 U.S.C. § 122 (b)(2)(B)(i) 17. ☐ Other:	
Note: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 MUST be included in an Application Data Sheet (ADS). (2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).					
19. CORRESPONDENCE ADDRESS: Customer Number 82750					
Signature		/Douglas J. Crisman/		Date	
				December 9, 2019	
Name (Print/Type)		Douglas J. Crisman		Registration No. (Attorney/Agent)	
				39,951	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Jeffrey P. Mathews et al.	Confirmation No.:	To be assigned
Serial No.:	To be assigned	Art Unit	To be assigned
Filed:	November 11, 2019	Examiner:	To be assigned
For:	Apparatus and Method for Seamless Commissioning of Wireless Devices	Attorney Docket No.:	104248-5365-US

STATEMENT UNDER 37 C.F.R. § 3.73(c)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

GOOGLE LLC, a corporation, states that it is the assignee of the entire right, title and interest of the patent application identified above by virtue of an assignment from the inventors of the parent of the patent application identified above:

- | | | | | |
|-----------|-----------------------------------|-------|--------|-------------|
| From: | Jeffrey P. Mathews, Lee R. Taylor | | | |
| To: | Mobiplug Networks Inc. | | | |
| Recorded: | 3/15/2013 | Reel: | 030020 | Frame: 0015 |
- | | | | | |
|-----------|------------------------|-------|--------|-------------|
| From: | Mobiplug Networks Inc. | | | |
| To: | Revolv Inc. | | | |
| Recorded: | 5/7/2013 | Reel: | 030364 | Frame: 0158 |
- | | | | | |
|-----------|-----------------|-------|--------|-------------|
| From: | Revolv Inc. | | | |
| To: | Nest Labs, Inc. | | | |
| Recorded: | 11/24/2014 | Reel: | 034254 | Frame: 0874 |
- | | | | | |
|-----------|-----------------|-------|--------|-------------|
| From: | Nest Labs, Inc. | | | |
| To: | Google Inc. | | | |
| Recorded: | 11/25/2014 | Reel: | 034266 | Frame: 0374 |
- | | | | | |
|-----------|-------------|-------|--------|-------------|
| From: | Google Inc. | | | |
| To: | Google LLC | | | |
| Recorded: | 10/2/2017 | Reel: | 044334 | Frame: 0466 |

The undersigned is authorized to act on behalf of the assignee.

Date: December 9, 2019

/Douglas J. Crisman/

39,951

Douglas J. Crisman

(Reg. No.)

MORGAN, LEWIS & BOCKIUS LLP

1400 Page Mill Road

Palo Alto, CA 94304

(650) 843-4000

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it displays a valid OMB control number

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

☒

Practitioners associated with Customer Number: 82750

OR

☐

Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number

Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

☒

The address associated with Customer Number: 82750

OR

☐

Firm or individual name		
Address		
City	State	Zip
Country		
Telephone	Email	

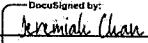
Assignee name and address:

Google LLC
1600 Amphitheatre Parkway, Mountain View, CA 94043

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee.

Signature	 DocuSigned by: Jeremiah Chan 2AC6B34DF08C42C	Date	10/19/2017
Name Jeremiah Chan		Telephone	
Title Assistant Secretary of Google LLC			

This collection of information is required by 37 CFR 1.31, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public, which is to update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 18 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE
ASSIGNEE**

TITLE OF INVENTION	APPARATUS AND METHOD FOR SEAMLESS COMMISSIONING OF WIRELESS DEVICES
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This is a combined declaration and assignment by the inventor(s) named below
to the assignee named below.

I. Declaration and Related Statements

As a below named inventor, I hereby declare that:

This declaration is directed to:

The attached application; or

United States application or PCT International application number _____
filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in
the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable
under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

II. Assignment

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), having
invented certain new and useful improvements as below entitled, for which application for
United States Letters Patent is made, the said application having been executed on even date
herewith;

AND WHEREAS, **MOBIPLUG NETWORKS INC.** together with any successors, legal
representatives, or assigns thereof, with its principal office at 2060 Broadway St., Suite 380,
Boulder, CO 80302, wants to acquire the entire right, title and interest in and to the said
invention(s), and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby
acknowledged, I have sold, assigned, transferred and set over, and do hereby sell, assign,
transfer and set over to the said **MOBIPLUG NETWORKS INC.**, its successors and assigns, the
entire right, title and interest in and to the said invention and in and to the said application
and all patents which may be granted thereon, and all divisions, reissues, substitutions,
continuations, and extensions thereof; and I/we hereby authorize and request the
Commissioner of Patents, and any officials of foreign countries whose duty it is to issue patents
on applications, to issue all patents for said invention, or patents resulting therefrom, insofar
as my interest in concerned, to the said **MOBIPLUG NETWORKS INC.** as assignee of my entire
right, title and interest;

I ALSO HEREBY sell and assign to **MOBIPLUG NETWORKS INC.**, its successors and assigns, my
foreign rights to the invention disclosed in said application, in all countries of the world,
including the right to file applications and obtain patents under the terms of the International
Convention for the Protection of Industrial Property, and of the European Patent Convention,
and further agree to execute any and all patent applications, assignments, affidavits, and any
other papers in connection therewith necessary to perfect such patent rights;

AND I HEREBY covenant that I have full right to convey the entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith;

AND I HEREBY further covenant that I will communicate to said **MOBIPLUG NETWORKS INC.**, or to its successors, assigns and legal representatives, any facts known to me respecting said invention, and at the expense of said **MOBIPLUG NETWORKS INC.**, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said **MOBIPLUG NETWORKS INC.**, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

III. Signatures

A. Inventors

Signature: Jeffrey P. Mathews		Date: 3/5/13
Signature: Lee R. Taylor		Date: 3/5/13

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	104248-5365-US
		Application Number	
Title of Invention	Apparatus and Method for Seamless Commissioning of Wireless Devices		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--------------------------	---

Inventor Information:

Inventor 1						Remove
Legal Name						
Prefix	Given Name		Middle Name		Family Name	Suffix
	Jeffrey		P.		Mathews	
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service						
City	Longmont		State/Province	CO	Country of Residence	US
Mailing Address of Inventor:						
Address 1		1600 Amphitheatre Parkway				
Address 2						
City	Mountain View			State/Province	CA	
Postal Code	94043			Country	US	
Inventor 2						Remove
Legal Name						
Prefix	Given Name		Middle Name		Family Name	Suffix
	Lee		R.		Taylor	
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service						
City	Boulder		State/Province	CO	Country of Residence	US
Mailing Address of Inventor:						
Address 1		1600 Amphitheatre Parkway				
Address 2						
City	Mountain View			State/Province	CA	
Postal Code	94043			Country	US	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.						
Add						

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	104248-5365-US
		Application Number	
Title of Invention	Apparatus and Method for Seamless Commissioning of Wireless Devices		

☐ An Address is being provided for the correspondence information of this application.

Customer Number	82750		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	Apparatus and Method for Seamless Commissioning of Wireless Devices		
Attorney Docket Number	104248-5365-US	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	6	Suggested Figure for Publication (if any)	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	82750		

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	104248-5365-US
		Application Number	
Title of Invention	Apparatus and Method for Seamless Commissioning of Wireless Devices		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove		
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
	Continuation of	15960337	2018-04-23		
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15960337	Continuation of	15452654	2017-03-07	9998325	2018-06-12
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15452654	Continuation of	15159735	2016-05-19	9591960	2017-03-07
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15159735	Continuation of	14927406	2015-10-29	9485790	2016-11-01
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14927406	Continuation of	13839828	2013-03-15	9198204	2015-11-24
Prior Application Status	Expired		Remove		
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
13839828	Claims benefit of provisional	61622620	2012-04-11		
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					

Foreign Priority Information:

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	104248-5365-US
		Application Number	
Title of Invention	Apparatus and Method for Seamless Commissioning of Wireless Devices		

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	 Access Code ⁱ (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. ☐ NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	104248-5365-US
	Application Number	
Title of Invention	Apparatus and Method for Seamless Commissioning of Wireless Devices	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People’s Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO’s Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	104248-5365-US
	Application Number	
Title of Invention	Apparatus and Method for Seamless Commissioning of Wireless Devices	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.								
Applicant 1								
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.								
Clear								
☒ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor						
☐ Person to whom the inventor is obligated to assign.	☐ Person who shows sufficient proprietary interest							
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:								
Name of the Deceased or Legally Incapacitated Inventor:								
If the Applicant is an Organization check here. ☒								
Organization Name	GOOGLE LLC							
Mailing Address Information For Applicant:								
Address 1	1600 Amphitheatre Parkway							
Address 2								
City	Mountain View	State/Province	CA					
Country	US	Postal Code	94043					
Phone Number		Fax Number						
Email Address								
Additional Applicant Data may be generated within this form by selecting the Add button.								

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	104248-5365-US
		Application Number	
Title of Invention	Apparatus and Method for Seamless Commissioning of Wireless Devices		

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	Given Name	Middle Name	Family Name	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		State/Province	
Country ⁱ		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Douglas J. Crisman/		Date (YYYY-MM-DD)	2019-12-09	
First Name	Douglas J.	Last Name	Crisman	Registration Number	39951

Additional Signature may be generated within this form by selecting the Add button.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	104248-5365-US
		Application Number	
Title of Invention	Apparatus and Method for Seamless Commissioning of Wireless Devices		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
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Apparatus and Method for Seamless Commissioning of Wireless Devices

ABSTRACT

An electronic device includes a first processor; a first commissioning element to communicate with external devices using wireless communication and a first memory storing programs for commissioning a target device onto a communication network. The communication network has configuration data including a network identifier and a network key. The programs provide a user interface for commissioning the target device. The target device includes a second processor, a second wireless radio, and a second commissioning element to receive the network configuration data. The target device decodes the network configuration data to commission the target device onto the communication network. The electronic device sends the network configuration data to the target device and receives confirmation that the target device has successfully connected to the communication network. The electronic device displays the success in a user interface.

What is claimed is:

1. A non-transitory computer readable storage medium storing one or more programs configured for execution by an electronic device for commissioning a target device onto a communication network, the electronic device including a first processor, a first wireless radio configured to communicate over the communication network, a first commissioning element configured to communicate network configuration data, and a first memory configured to store the one or more programs for execution by the first processor, the one or more programs being configured to, when executed by the electronic device, cause the electronic device to perform operations comprising:

providing a user interface for commissioning the target device, wherein the target device includes a second processor, a second wireless radio, and a second commissioning element configured to receive the network configuration data, the second processor being configured to decode and process the network configuration data for commissioning the target device onto the communication network;

formatting and communicating to the target device, via the first commissioning element, the network configuration data associated with the communication network according to a predetermined format, the network configuration data including an identifier of the communication network and a network key for the communication network that enables connection to the communication network by the target device; and

receiving information indicating that the target device has successfully connected to the communication network.

Apparatus and Method for Seamless Commissioning of Wireless Devices

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of and claims priority to U.S. Utility Patent Application No. 15/960,337, filed April 23, 2018, titled “Apparatus and Method for Seamless Commissioning of Wireless Devices,” which is a continuation of and claims priority to U.S. Utility Patent Application No. 15/452,654, filed March 7, 2017, issued as U.S. Patent No. 9,998,325 on June 12, 2018, titled “Apparatus and Method for Seamless Commissioning of Wireless Devices,” which is a continuation of and claims priority to U.S. Utility Patent Application No. 15/159,735, filed May 19, 2016, issued as U.S. Patent No. 9,591,690 on March 7, 2017, titled “Apparatus and Method for Seamless Commissioning of Wireless Devices,” which is a continuation of and claims priority to U.S. Utility Patent Application No. 14/927,406, filed October 29, 2015, issued as U.S. Patent No. 9,485,790 on November 1, 2016, titled “Apparatus and Method for Seamless Commissioning of Wireless Devices,” which is a continuation of and claims priority to U.S. Utility Patent Application No. 13/839,828, filed March 15, 2013, issued as U.S. Patent No. 9,198,204 on November 24, 2015, titled “Apparatus and Method for Seamless Commissioning of Wireless Devices,” which claims priority to and the benefit of U.S. Provisional Application No. 61/622,620, filed on April 11, 2012, titled “Apparatus and Method for Seamless Commissioning of Wireless Devices.” The content of each of the above applications is herein incorporated by reference in its entirety.

TECHNICAL FIELD

[0002] This invention relates in general to the field of electronic device commissioning, and more particularly to an apparatus and method for seamless commissioning of electronic devices onto wireless local area networks (WLANs).

BACKGROUND

[0003] It is almost incredible to realize the number of electronic devices that exist today, and even more so when one considers the exponentially increasing number of those devices that

are configured for wireless network integration. On the business front, laptop computers, smart phones, and tablet computers abound. On the personal front, home automation is crossing thresholds which have heretofore been untouched. Today's average consumer has access to the Internet via a high speed connection and most probably has a wireless network in their home. Attached to that wireless network are home computers, digital readers, wireless printers, and some form of wireless entertainment equipment, such as streaming media players and the like.

[0004] On top of this, everyday appliances such as door locks, thermostats, garage door openers, outlets, and light switches are now being configured for wireless operation. Both businesses and homes frequently are equipped with alarm systems that function wirelessly. The list continues to grow.

[0005] But as one skilled in the art will appreciate, wireless electronic devices do not merely connect themselves to the nearest wireless network. Rather, they must be "commissioned" onto a desired network. That is, the particular devices must be provided with configuration data to enable them to join the desired wireless network so that they can function according to specification by utilizing the communication properties of the network.

[0006] Yet, at this point in time, virtually every electronic device is different in the manner in which they are commissioned onto a wireless network. Some devices require a sequence of switch actuations that are coordinated with similar actuations on a controller device. Other devices have rudimentary keypads whereby a user enters the configuration information, often in cryptic and unintelligible form. Still other devices have keypads and displays that allow for data entry that is somewhat more user friendly. Yet more devices utilize other coupled devices (e.g., televisions and special remote controls) to enter network names and passwords. And as a result, the average user of these wireless devices must either be very smart, or they require assistance from someone who is knowledgeable.

[0007] Accordingly, what is needed is a technique for commissioning a wireless device onto a wireless network that the average consumer can employ without undue distress.

[0008] In addition, what is needed is a mechanism for commissioning wireless devices that utilizes common, user friendly steps and equipment.

SUMMARY

[0009] The present invention, among other applications, is directed to solving the above-noted problems and addresses other problems, disadvantages, and limitations of the prior art. The present invention provides a superior technique for commissioning one or more electronic devices onto an existing wireless local area network. In one embodiment an apparatus is provided for commissioning a target device onto a wireless local area network (WLAN). The apparatus includes a smart wireless device. The smart wireless device has commissioning logic and a transducer. The commissioning logic is configured to format and direct transmission of one or more WLAN configuration packets that convey WLAN configuration data. The transducer is coupled to the commissioning logic, and is configured to transmit the one or more WLAN configuration packets over the transmission path to the target device, wherein the transducer is an existing component of the smart wireless device.

[0010] One aspect of the present invention contemplates an apparatus for wireless local area network (WLAN) device commissioning. The apparatus has a smart wireless device and a target device. The smart wireless device includes first commissioning logic and a first transducer. The first commissioning logic is configured to format and direct transmission of one or more WLAN configuration packets. The first transducer is coupled to the first commissioning logic, and is configured to transmit the one or more WLAN configuration packets over the transmission path, where the first transducer is an existing component of the smart wireless device. The target device includes a second transducer, second commissioning logic, and a wireless radio. The second transducer is configured to receive the one or more WLAN configuration packets. The second commissioning logic is coupled to the second transducer, and is configured to decode and process the one or more WLAN configuration packets to recover WLAN configuration data. The wireless radio is operatively coupled to the commissioning logic, and is configured to employ the WLAN configuration data to enable the target device to join a WLAN.

[0011] Another aspect of the present invention comprehends a method for wireless local area network (WLAN) device commissioning. The method includes: executing a first application on a smart wireless device to format and direct transmission of one or more

WLAN packets; via a first transducer of the smart wireless device, transmitting the one or more WLAN configuration packets over a transmission path, where the first transducer is an existing component of the smart wireless device; via a second transducer disposed within a target device, receiving the one or more WLAN configuration packets; executing a second application on the target device to decode and process the one or more WLAN configuration packets to recover WLAN configuration data; and via a wireless radio disposed within the target device, employing the WLAN configuration data to enable the target device to join a WLAN.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] These and other objects, features, and advantages of the present invention will become better understood with regard to the following description, and accompanying drawings where:

[0013] FIG. 1 is a block diagram illustrating a present day device commissioning technique;

[0014] FIG. 2 is a block diagram depicting present day commissioning mechanisms such as might be employed in the technique of FIG. 1;

[0015] FIG. 3 is a block diagram featuring an exemplary seamless device commissioning technique according to the present invention;

[0016] FIG. 4 is a block diagram showing a smart wireless commissioning device according to the present invention;

[0017] FIG. 5 is a block diagram illustrating a commissioned device according to the present invention;

[0018] FIG. 6 is a block diagram detailing features of an exemplary commissioning device according to the present invention;

[0019] FIG. 7 is a block diagram showing details of an exemplary commissioned device according to the present invention; and

[0020] FIG. 8 is a block diagram illustrating an exemplary commissioning packet according to the present invention.

DETAILED DESCRIPTION

[0021] Exemplary and illustrative embodiments of the invention are described below. In the interest of clarity, not all features of an actual implementation are described in this specification, for those skilled in the art will appreciate that in the development of any such actual embodiment, numerous implementation specific decisions are made to achieve specific goals, such as compliance with system-related and business related constraints, which vary from one implementation to another. Furthermore, it will be appreciated that such a development effort might be complex and time-consuming, but would nevertheless be a routine undertaking for those of ordinary skill in the art having the benefit of this disclosure. Various modifications to the preferred embodiment will be apparent to those skilled in the art, and the general principles defined herein may be applied to other embodiments. Therefore, the present invention is not intended to be limited to the particular embodiments shown and described herein, but is to be accorded the widest scope consistent with the principles and novel features herein disclosed.

[0022] The present invention will now be described with reference to the attached figures. Various structures, systems, and devices are schematically depicted in the drawings for purposes of explanation only and so as to not obscure the present invention with details that are well known to those skilled in the art. Nevertheless, the attached drawings are included to describe and explain illustrative examples of the present invention. The words and phrases used herein should be understood and interpreted to have a meaning consistent with the understanding of those words and phrases by those skilled in the relevant art. No special definition of a term or phrase (i.e., a definition that is different from the ordinary and customary meaning as understood by those skilled in the art) is intended to be implied by consistent usage of the term or phrase herein. To the extent that a term or phrase is intended to have a special meaning (i.e., a meaning other than that understood by skilled artisans) such a special definition will be expressly set forth in the specification in a definitional manner that directly and unequivocally provides the special definition for the term or phrase.

[0023] In view of the above background discussion on device commissioning and associated techniques employed within present day systems for commissioning a wireless device into a wireless network, a discussion of the limitations of these present day mechanisms will now be discussed with reference to FIGS. 1-2. Following this, a discussion of the present invention

will be presented with reference to FIGS. 3-8. The present invention overcomes limitations of present day device commissioning techniques by providing apparatus and methods that enable devices to be commissioned into a wireless network without requiring special purpose commissioning hardware, administrative access to network equipment, the creation of ad hoc networks, or compromises to operational security.

[0024] Turning to FIG. 1, a block diagram 100 is presented illustrating a present day device commissioning technique. The diagram 100 depicts a wireless local area network (WLAN) access point 101 that controls access to and communications over a WLAN 104. As one skilled in the art will appreciate, the access point 101 may also be referred to as a Wi-Fi access point 101, a Wi-Fi router 101, a Wi-Fi gateway 101, a Wi-Fi hub 101, and the like which refer to a controller 101 that allows electronic devices 105-107 to exchange data wirelessly over a wireless network 104. Often, the network 104 utilizes protocols based on the Institute of Electrical and Electronics Engineers' (IEEE) 802.11 standards, however, such references are not intended to limit protocols of the network 104 to 802.11, but rather reference is made to the well known 802.11 standards in order to teach aspects of the present invention.

[0025] The WLAN access point 101 is coupled via bus 103 to the Internet in any of number of well known ways to include digital subscriber line (DSL), cable, and wireless radio link. As such, the access point 101 enables the devices 105-107 to communicate with each other, and also to other devices (not shown) over the Internet 102.

[0026] The diagram 100 shows a printer 105 and a digital media receiver 106 (e.g., APPLETV®, ROKU®, DIRECTV®) that are coupled to the access point 101 via the WLAN 104. The diagram additionally shows an other device 107 that is not yet coupled to the access point 101 via the WLAN 104, and which requires commissioning into the WLAN 104. As one skilled in the art will appreciate, the other device 107 may comprise, but is not limited to a personal computer, a video game console, a smartphone, a tablet computer, an alarm console, a streaming media player, network attached storage, and any number of other Wi-Fi enabled appliances (e.g., outlets, lights, locks, sensors, etc.). Although reference is made to “Wi-Fi enabled appliances,” the present inventors noted that applications of the present invention extend beyond commonly construed “Wi-Fi” protocols (i.e., IEEE 802.11 protocols) to comprehend any wireless protocol, as will be discussed in further detail below. For purposes of the present

disclosure, “commissioning” is construed to mean configuration of the other device 107 and the system 100 as a whole such that the other device 107 is enabled to function properly over the WLAN 104 including, if required, access to the Internet 102.

[0027] As one skilled in the art will appreciate, there are a number of varying techniques that may be employed to commission present day devices onto a WLAN 104. Some of these techniques require operator intervention, some require the use of special purpose commissioning equipment 108, and some require the creation of temporary (or ad hoc) wireless networks 109. And the present inventors have noted that as wireless device usage proliferates in the office and the home, this cornucopia of commissioning techniques poses challenges to those in the art, because each individual technique is limited with regard to one system attribute or another. A more detailed discussion of the limitations associated with present day commissioning techniques will now be presented with reference to FIG. 2.

[0028] FIG. 2 is a block diagram 200 depicting present day commissioning mechanisms such as might be employed in the technique of FIG. 1. The diagram 200 depicts a WLAN access point 201 that is coupled to the Internet 202 via a bus 203, and which controls access to a wireless LAN 204. Operationally, the access point 201 functions substantially like the access point 101 of FIG. 1. A printer 205 is coupled to the access point 201 via the WLAN 204. The printer 205 has a controller 215 that is coupled to a keyboard 216 and display 217. The diagram 200 also shows a digital media receiver 206 that is coupled to the access point 201 via the WLAN 204. The receiver 206 is also coupled to a remote controller 213 via a radio wave bus 218, and to a video display 214 (e.g., a television) via bus 219. The diagram 200 additionally depicts an other device 207 that requires commissioning onto the WLAN 204. The other device 207 includes a controller 208 that is coupled to a pushbutton switch 212.

[0029] The particular elements shown in FIG. 2 are well known to those in the art and are selected to illustrate limitations associated with some of the most prevalently employed present day commissioning techniques. For example, one well known commissioning technique utilizes coordinated activation of pushbutton switches to initiate the exchange of configuration data so that, say, the other device 207 can join the WLAN 204. Accordingly, a commissioning pushbutton switch 211 is shown on the access point 201, which functions in this scenario as a system controller for the other device 207. Thus, a technician is required to perform a time

synchronized actuation of the pushbutton switches 211, 212 on both the access point and the other device 207 and by doing so, the access point 201 begins transmission of packets that include configuration data, thus enabling the other device 207 to subsequently join the WLAN 204. Transmission of this configuration data is typically accomplished utilizing the same radio transceivers (not shown) as are required for interoperability over the WLAN 204 itself. But the present inventors have observed that this “pushbutton” commissioning technique is disadvantageous because physical and/or administrative access to the access point 201 is required in order to accomplish commissioning of the other device 207, and in office and other scenarios where security concerns are paramount, such access may not be easily obtained.

[0030] Another well known present day commissioning technique provides for the direct entry of device configuration data utilizing integral or directly coupled controls and displays. For instance, consider a scenario under which an operator may commission the printer 205 onto the WLAN 204 by performing a series of data entry steps via the keypad 216 and display 217. The operator may select from a menu of WLAN types and then the printer 205 will monitor for available networks of that type, thus allowing the operator to select from a menu of available networks. The operator may then be required to enter secure access information (e.g., passwords, etc.) to enable the printer to join the WLAN.

[0031] Or consider a more intelligent commissioning technique where, say, the digital media receiver 206 possesses the capabilities to determine the appropriate WLAN 204 to join, and all that is needed is for the operator to enter a personal identification number (PIN) via the remote controller 213 and verify configuration setup via the video display 214.

[0032] The above commissioning techniques may be categorized in general as Wi-Fi protected setup techniques, and are well known to those in the art. Other techniques also include the use of near-field communications and the use of a direct connection such as Universal Serial Bus (USB). In more extreme cases, a device to be commissioned (e.g., the other device 207), may create a temporary network and require the operator to configure a computing device (not shown) to join the temporary network. Then, the computing device is subsequently used to issue commands and configuration data to the devices, thus allowing it to join the intended WLAN 204.

[0033] Alternatively, the device to be commissioned may be required to monitor for specially formatted probes or beacon request messages in order to decode network configuration data therefrom. Such a scenario could be employed utilizing the pushbutton method discussed above.

[0034] The present inventors note that, as one skilled in the art will appreciate, virtually all of the above noted commissioning techniques require physical and/or administrative access to either the access point 201 or to special commissioning equipment which, as is alluded to above, may not be easily obtained. It is also noted that commissioning techniques that involve the use of PINS and/or the direct entry of configuration data present the opportunity for tampering and or breach of security through the compromise of trusted data. It is furthermore noted that the creation of near-field communications and ad hoc networks requires dedicated equipment for such purposes. And moreover, all of the techniques discussed above present challenges to those other than a skilled technician. A typical operator may not be skilled in the entry of network configuration data or configuration of special commissioning equipment. In addition, for those techniques that temporarily open a network in order to commission as device, such an action is both observable and sniffable, thus providing a pathway for exploitation of the compromised parameter that allow unauthorized users and devices to join the network at a later time. Consequently, the wide range of complex commissioning techniques are challenging those in the art to develop more user-friendly, secure, and effective mechanisms for device commissioning than have heretofore been provided. More specifically, with the exponential increase in the deployment of wireless devices in the marketplace, those in the art are motivated to provide commissioning techniques that a typical user can perform without problems.

[0035] The present invention overcomes the above noted limitations, and others, by providing an apparatus and method for seamless device commissioning which, in one embodiment, leverages the ubiquitous nature and use of so-called “smart” wireless devices in the home and office. The present invention will now be discussed with reference to FIGS. 3-8.

[0036] Turning to FIG. 3, a block diagram 300 is presented featuring an exemplary seamless device commissioning technique according to the present invention. The diagram. The diagram 300 depicts a wireless local area network (WLAN) access point 301 that controls access to and communications over a WLAN 304. Like the access point 101 of FIG. 1, the access point

301 according to the present invention allows electronic devices 305-307 to exchange data wirelessly over the wireless network 304 once the devices 305-307 are commissioned onto the WLAN 304. In one embodiment, the network 304 utilizes protocols based on the Institute of Electrical and Electronics Engineers' (IEEE) 802.11 standards, however, such references are not intended to limit protocols of the network 304 to 802.11, but rather reference is made to the well known 802.11 standards in order to teach aspects of the present invention.

[0037] The WLAN access point 301 is coupled via bus 303 to the Internet in any of a number of well-known ways to include digital subscriber line (DSL), cable, and wireless radio link. As such, the access point 301 enables the devices 305-307 to communicate with each other, and also to other devices (not shown) over the Internet 302.

[0038] The diagram 300 shows a printer 305 and a digital media receiver 306 (e.g., APPLETV®, ROKU®, DIRECTV®) that are coupled to the access point 301 via the WLAN 304. The diagram additionally shows another device 307 that is not yet coupled to the access point 301 via the WLAN 304, and which requires commissioning into the WLAN 104. As one skilled in the art will appreciate, the other device 307 may comprise, but is not limited to a personal computer, a video game console, a smartphone, a tablet computer, an alarm console, a streaming media player, network attached storage, and any number of other Wi-Fi enabled appliances (e.g., outlets, lights, locks, sensors, etc.).

[0039] Like the printer 205 of FIG. 2, the printer 305 of FIG. 3 includes a controller 315 that is coupled to a keyboard 316 and a display 317, which are employed according to one of the present day methods described above to commission the printer 305 onto the WLAN 304. And like the receiver 206 of FIG. 2, the receiver 306 of FIG. 3 is coupled to a remote controller 313 via bus 318 and a video display 314 via bus 319, which are employed according to one of the present day methods described above to commission the receiver 306 onto the WLAN 304.

[0040] However, in contrast to present day commissioning techniques, the technique according to the present invention utilizes a smart wireless device 321 to commission the other device 307 according to the present invention onto the WLAN 304 by utilizing existing mechanisms (i.e., transmitting elements (not shown)) on the smart wireless device 321 to transmit configuration information over a transmission path 322 to the other device 307, thus enabling the other device 307 to join the WLAN. The other device 307 is configured to include

receiving elements (not shown) that correspond to the transmitting elements and transmission path 322, thus enabling the other device 307 to receive and process the configuration information. It is a feature of the present invention to employ a smart wireless device 321 and to utilize existing elements within the smart wireless device 321 to transmit the configuration information to the other device such as an internal microcomputer, memory, a camera flash, backlit display, touchscreen or keyboard, and the like. Advantageously then, commissioning can be affected without a requirement for special commissioning equipment or special user skills.

[0041] In one embodiment, the smart wireless device 321 comprises a smart cellular telephone such as, but not limited to, an IPHONE® or ANDROID® phone. In another embodiment, the smart wireless device 321 comprises a tablet computer such as, but not limited to, an IPAD® or an ANDROID® tablet. Other embodiments of the smart wireless device 321 are contemplated which are capable of providing the functions and mechanisms discussed below.

[0042] In one embodiment, the smart wireless device 321 utilizes a side band, proximity based, communication channel 322 that is established between the smart wireless device 321 and the other device 307 to be commissioned onto the WLAN 304. The transmitting and receiving elements perform the functions and operations as discussed above. The transmitting and receiving elements comprise logic, circuits, devices, or program instructions executed by a microprocessor or other processing unit, or a combination of logic, circuits, devices, or program instructions executing on a microprocessor or other processing unit, or equivalent elements that are employed to execute the functions and operations according to the present invention as disclosed herein. The elements employed to accomplish these operations and functions within the transmitting and receiving elements may be shared with other circuits, program instructions, etc., that are employed to perform other functions and/or operations within the transmitting and receiving elements. In one embodiment, the smart device 321 constructs a commissioning message that includes WLAN configuration data. The message is transmitted by the smart device 321 to the other device 307 via the transmitting elements and the message is received by the other device 307 via the receiving elements. In one embodiment, the WLAN configuration data comprises the name of the WLAN, security mode, and any required security passphrase. Other embodiments contemplate additional or different configuration data as is appropriate for commissioning the other device 307.

[0043] In operation, the other device 307 extracts the WLAN configuration data from the received configuration message and employs the configuration data in order to join the WLAN 304.

[0044] In one embodiment, the transmitting elements comprise an existing camera flash and the receiving elements comprise an optical sensor. Another embodiment contemplates utilization of a display backlight that transmits optical signals to an optical sensor. A further embodiment comprehends the use of infrared transmission and receiving elements. Still another embodiment utilizes an acoustic speaker and microphone to transfer the configuration data via sound. Yet another embodiment utilizes BLUETOOTH® or substantially similar radio transmissions to transfer the configuration data. Further embodiments utilize near field communications (NFC) or mechanical vibration/accelerometer transmission.

[0045] Alternative embodiments of the transmitting elements may use disparate radio frequencies such as, but not limited to, 433 Megahertz (MHz), 868 MHz, 900 MHz, 2.4 Gigahertz (GHz), or 5.2 GHz. These embodiments may use radio modulation techniques such as, but not limited to, frequency shift keying (FSK), phase shift keying (PSK), on-off keying (OOK), and quadrature amplitude modulation (QAM). These embodiments may use radio frequency (RF) communication standards such as, but not limited to, near field communication (NFC), RF identification (ID), BLUETOOTH LOW ENERGY®, Zigbee®, radio frequency for consumer electronics (RF4CE®), Z-Wave®, or other proprietary standards.

[0046] Referring now to FIG. 4, a block diagram is presented showing a smart wireless commissioning device 400 according to the present invention. The smart device 400 is configured to format and transmit WLAN configuration data to a corresponding device to be commissioned according to the present invention by utilizing an optical transmission path. The smart device 400 comprises a microcomputer 401 (e.g., microprocessor, central processing unit, processor, microcontroller, and etc.) that is coupled to commissioning logic 402. The microcomputer is also coupled to an existing touchscreen 404, a display 405, a wireless radio 406, and a camera flash 407. In one embodiment, the camera flash 407 is employed as a transmitter to convey configuration data to the device to be commissioned.

[0047] Operationally, the microcontroller 401 includes processing circuits that are employed to format and configure WLAN configuration packets which are optically transmitted

by the camera flash 407 by modulating the flash 407 on and off to transmit the packets according to any well known communication protocol or via a proprietary protocol. The commissioning logic 402 includes program instructions that direct the microcontroller 401 to format and transmit the WLAN configuration packets to the device to be commissioned. In one embodiment, the commissioning logic 402 comprises an existing memory element (e.g., random access memory (RAM), read-only memory (ROM), electrically programmable ROM (EPROM), flash memory) within the device 400. In this embodiment, the commissioning logic 402 may be external to the microcontroller 401 or internal to the microcontroller 401. An alternative embodiment comprehends stand-alone commissioning logic 402 (e.g., circuits and/or program instructions) that operates to transmit the commissioning packets independent from operation of other device functions provided for by the microcontroller 401.

[0048] The touchscreen 404 and display 405 are employed to initiate execution of the program instructions by the microcontroller via, in one embodiment, launching a commissioning application on the smart wireless device 400. Additionally, the display 405 may be employed to provide status and/or commissioned device information. The WLAN configuration data is optically transmitted by the flash 407 over an optical transmission patch 409 to the device to be commissioned. The wireless radio 406 may be employed via a WLAN 408 to communicate with a WLAN access point (not shown) or to the commissioned device following commissioning.

[0049] In lieu of using the camera flash 407, an alternative embodiment of the smartphone commissioning device 400 employs a backlight function of the display 405 as the transmitter portion of the transmitting element, where the backlight is modulated on and off as described above. Other embodiments for optically transmitting the commissioning message are contemplated such as intensity modulation (e.g., brightness) and/or modulation of the color of the backlight.

[0050] Operationally, the remaining elements of the smart wireless device 400 work according to control provided by the commissioning logic 402 (or the commissioning logic 401 in conjunction with the microcontroller 401) to cause the camera flash 407 to transmit the commissioning packets to the device to be commissioned, thereby allowing it to join the WLAN 408. In one embodiment, after the commissioned device has joined the WLAN 408, the wireless radio 406 is employed to optionally receive commissioning confirmation data from and/or to

transmit supplemental configuration data to the commissioned device via the WLAN connection 408.

[0051] As is appropriate for the chosen transmitting element and receiving element, a variety of well-known communication protocols, error correcting codes, line coding, and/or modulation techniques may be used to send the messages from the transmitter to the receiver in a reliable manner according to the present invention.

[0052] Now turning to FIG. 5, a block diagram is presented illustrating a commissioned device 500 according to the present invention. The commissioned device 500 may be commissioned onto a WLAN by the smart wireless device 400 of FIG. 4. The commissioned device 500 comprises a microcontroller 501 that is coupled to commissioning logic 502. The microcontroller 501 is also coupled to an optical sensor 503 and to a wireless radio 504. In the embodiment shown, the optical sensor 503 is employed as a transducer to receive WLAN configuration data from the wireless smart device 400 of FIG. 4 over an optical transmission link 509.

[0053] Operationally, the microcontroller 501 includes processing circuits that are employed to decode and process WLAN configuration packets which are optically received by the optical sensor 503 over the transmission link 509. The commissioning logic 502 includes program instructions that direct the microcontroller 501 to decode and process the WLAN configuration packets. In one embodiment, the commissioning logic 502 comprises an existing memory element within the device 500. In this embodiment, the commissioning logic 502 may be external to the microcontroller 501 or internal to the microcontroller 501. An alternative embodiment comprehends stand-alone commissioning logic 502 (e.g., circuits and/or program instructions) that operates to receive the commissioning packets independent from operation of other device functions provided for by the microcontroller 501.

[0054] In one embodiment, after the commissioned device has joined the WLAN 508, the wireless radio 506 is employed to optionally transmit commissioning confirmation data to and/or to receive supplemental configuration data from the smart wireless device and to communicate with the access point and other devices on the WLAN connection 508 as required.

[0055] Referring to FIG. 6, a block diagram is presented detailing features of an exemplary commissioning device 600 according to the present invention, such as the smart

wireless device 400 of FIG. 4. The device 600 includes WLAN configuration data 601 that is provided to a forward error correction (FEC) encoder 602. Encoded configuration data is generated by the encoder 602 and is provided to a line coding element 603. One embodiment contemplates a Manchester encoder 603. The line coding element 603 removes any direct current (DC) component from the configuration packets and allows transmission thereof to be self-clocking. Line coded configuration data is thus provided to a modulator 605. The modulator 605 is also coupled to a timebase 604. The modulator 605 combines the line coded data with timebase data to enable one or more corresponding optical messages to be serially transmitted. Modulated configuration data is thus provided by the modulator 605 to a flash 606, which transmits the WLAN configuration packets over an optical transmission path 609. Elements 601-605 may be implemented by a combination of elements within the microcontroller 401 and commissioning logic 402 of FIG. 4.

[0056] Now referring to FIG. 7, a block diagram is presented showing details of an exemplary commissioned device 700 according to the present invention, such as the commissioned device 500 of FIG. 5. The commissioned device 700 includes an optical sensor 701 that is employed as a transducer to receive WLAN configuration data packets which are transmitted over an optical channel 709 by a commissioning device according to the present invention. The received bit stream is provided by the sensor 701 to a demodulator 702 that is also coupled to a timebase 703. The demodulator 702 may employ accurate timebase data to sample the transmission at a higher rate than the original timebase 604 used by the modulator 605 of FIG. 6. The output of the demodulator 702 is then sent to clock recovery 704. The clock recovery utilizes the line coding added by the transmitter to discover the original timebase used by the modulator 605. The clock recovery 704 then discards any extra samples and removes the line coding. The output of clock recovery 704 is then sent to an FEC decoder 705 which corrects any errors found in the transmission and recovers one or more commissioning messages. The commissioning messages provide the WLAN configuration data 706, which is used by the product to join the WLAN. Elements 702-706 may be implemented by a combination of elements within the microcontroller 501 and commissioning logic 502 of FIG. 5.

[0057] Referring now to FIG. 8, a block diagram is presented illustrating an exemplary commissioning packet 800 according to the present invention. The packet 800 includes a preamble field 801, a header field 802, a service set identifier (SSID) field 803, a key field 804,

and a cyclic redundancy check (CRC) field 805. Operationally, the preamble 801 may be a 16-bit stream of repeating zeros and ones that allow a receiver according to the present invention to asynchronously synchronize with a transmitter according to the present invention. The header 802 may comprise two bytes, the first of which may be employed as a start frame delimiter and the second of which identifies a message type. The SSID 803 identifies the wireless network service set, and the key field 804 may comprise the network key. The CRC 805 is the result of a 16-bit CRC over the SSID 803 and key 804 fields using the polynomial $X^{16}+X^2+X^5+1$.

[0058] Although the present invention and its objects, features, and advantages have been described in detail, other embodiments are encompassed by the invention as well. For example, some embodiments may require that the device to be commissioned be placed into a commissioning mode to receive the commissioning messages. Other embodiments may accept the commissioning messages concurrent with other operations of the commissioned device.

[0059] Some embodiments may transmit the WLAN configuration data in a single commissioning message, while other embodiments employ multiple commissioning messages to communicate the configuration data.

[0060] Some embodiments of the present invention may transmit other information in addition to WLAN configuration data. In one such embodiment, the commissioning device sends its own Internet protocol (IP) address, proxy, and gateway configuration to the device to be commissioned. Once the device to be commissioned has successfully joined the WLAN, then the device proceeds to contact the commissioning device via the WLAN to indicate success and to optionally communicate additional configuration data as is described above.

[0061] In some embodiments, the commissioned device provides a visual or audio indication to the user about the status of the commissioning process. In one embodiment, the commissioned device may illuminate an indicator (e.g., light emitting diode (LED)) to indicate progress, success, or failure of the commissioning. In another embodiment, the commissioned device may use a speaker to provide an audio indication of the commissioning status.

[0062] One embodiment of the present invention includes a configuration mode where the commissioned device communicates back to the smart wireless device via optical or audio transmission. The smart wireless device may observe this communication with existing hardware, such as a built-in camera for reception of the optical transmission, or a microphone for reception

of the audio transmission. This type of communication may be used to alert the smart wireless device (and operator) of success or failure conditions.

[0063] In other embodiments, the commissioning device may be informed of the WLAN configuration data in a variety of ways. In one embodiment, it may derive the WLAN configuration data from its own active connection to the WLAN. In another embodiment, WLAN configuration data may be entered by the user directly into the commissioning device via the touchscreen and/or keyboard. Another embodiment contemplates automatic derivation of the WLAN configuration data by contact with a server or via some other record of the configuration data. Combinations of the above noted embodiments are also comprehended for determination of the configuration data by the commissioning device.

[0064] Further embodiments contemplate usage of desktop and laptop computers as commissioning devices, where their display screens, backlights, speakers, microphones, and the like are employed for visual communication of commissioning messages.

[0065] Advantageously, a commissioned device according to the present does not require its own user interface, but rather the commissioning device's existing display and/or touchscreen may be utilized to input commissioning data and to output commissioning results.

[0066] In addition, from an operator perspective, configuration data is sent from the commissioning device to the product device in a single step rather than a complex series of single data entry actions.

[0067] Furthermore, since a smart wireless device is employed as a commissioning device, it already possesses the ability to automatically discover WLAN configuration, thus simplifying user experience.

[0068] Portions of the present invention and corresponding detailed description are presented in terms of software, or algorithms and symbolic representations of operations on data bits within a computer memory. These descriptions and representations are the ones by which those of ordinary skill in the art effectively convey the substance of their work to others of ordinary skill in the art. An algorithm, as the term is used here, and as it is used generally, is conceived to be a self-consistent sequence of steps leading to a desired result. The steps are those requiring physical manipulations of physical quantities. Usually, though not necessarily, these

quantities take the form of optical, electrical, or magnetic signals capable of being stored, transferred, combined, compared, and otherwise manipulated. It has proven convenient at times, principally for reasons of common usage, to refer to these signals as bits, values, elements, symbols, characters, terms, numbers, or the like.

[0069] It should be borne in mind, however, that all of these and similar terms are to be associated with the appropriate physical quantities and are merely convenient labels applied to these quantities. Unless specifically stated otherwise, or as is apparent from the discussion, terms such as “processing” or “computing” or “calculating” or “determining” or “displaying” or the like, refer to the action and processes of a computer system, a microprocessor, a central processing unit, or similar electronic computing device, that manipulates and transforms data represented as physical, electronic quantities within the computer system's registers and memories into other data similarly represented as physical quantities within the computer system memories or registers or other such information storage, transmission or display devices.

[0070] Note also that the software implemented aspects of the invention are typically encoded on some form of program storage medium or implemented over some type of transmission medium. The program storage medium may be electronic (e.g., read only memory, flash read only memory, electrically programmable read only memory), random access memory magnetic (e.g., a floppy disk or a hard drive) or optical (e.g., a compact disk read only memory, or “CD ROM”), and may be read only or random access. Similarly, the transmission medium may be metal traces, twisted wire pairs, coaxial cable, optical fiber, or some other suitable transmission medium known to the art. The invention is not limited by these aspects of any given implementation.

[0071] The particular embodiments disclosed above are illustrative only, and those skilled in the art will appreciate that they can readily use the disclosed conception and specific embodiments as a basis for designing or modifying other structures for carrying out the same purposes of the present invention, and that various changes, substitutions and alterations can be made herein without departing from the scope of the invention as set forth by the appended claims.

FIG. 1 (Prior Art)

PRESENT DAY DEVICE COMMISSIONING

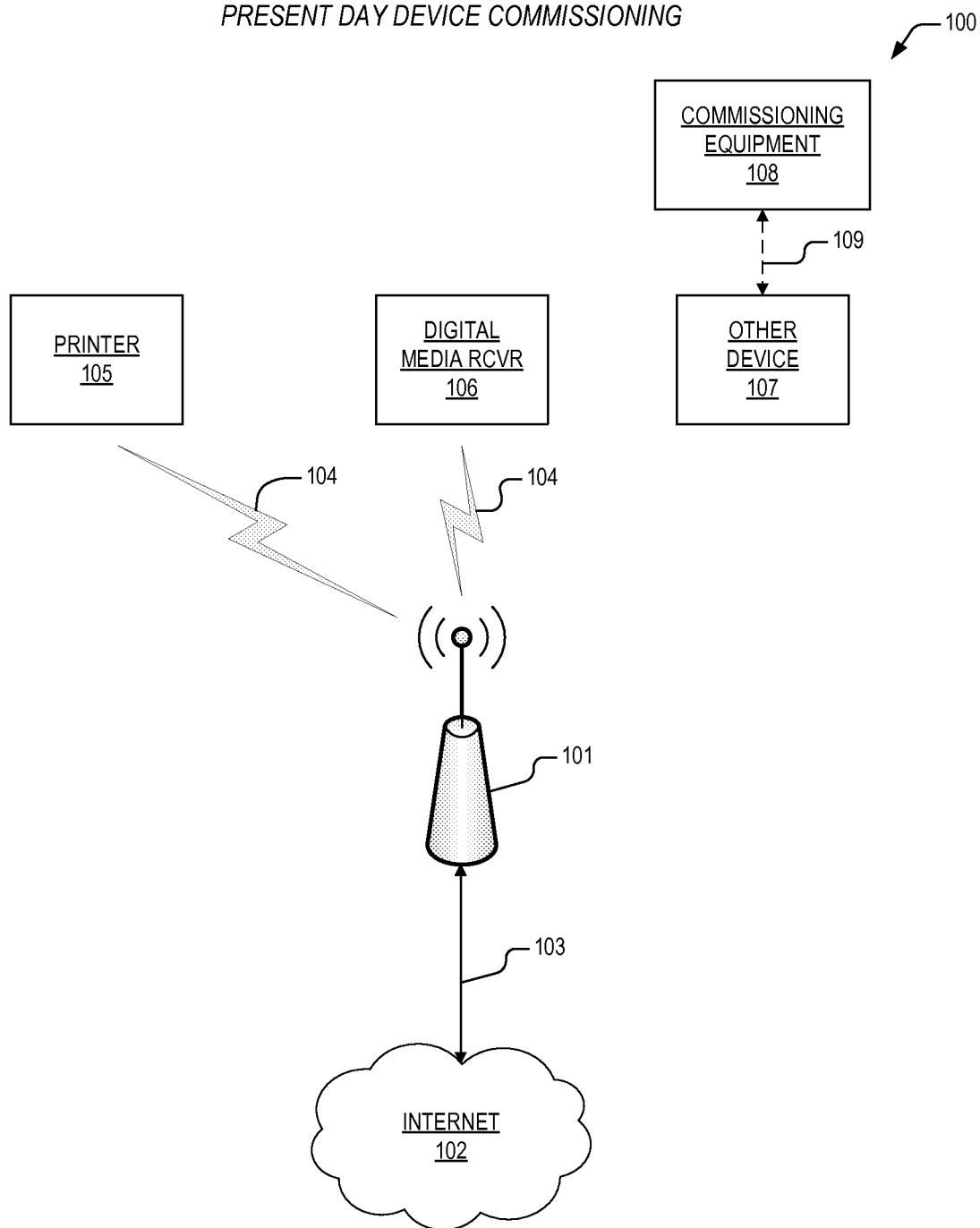


FIG. 2 (Prior Art)

PRESENT DAY DEVICE COMMISSIONING MECHANISMS

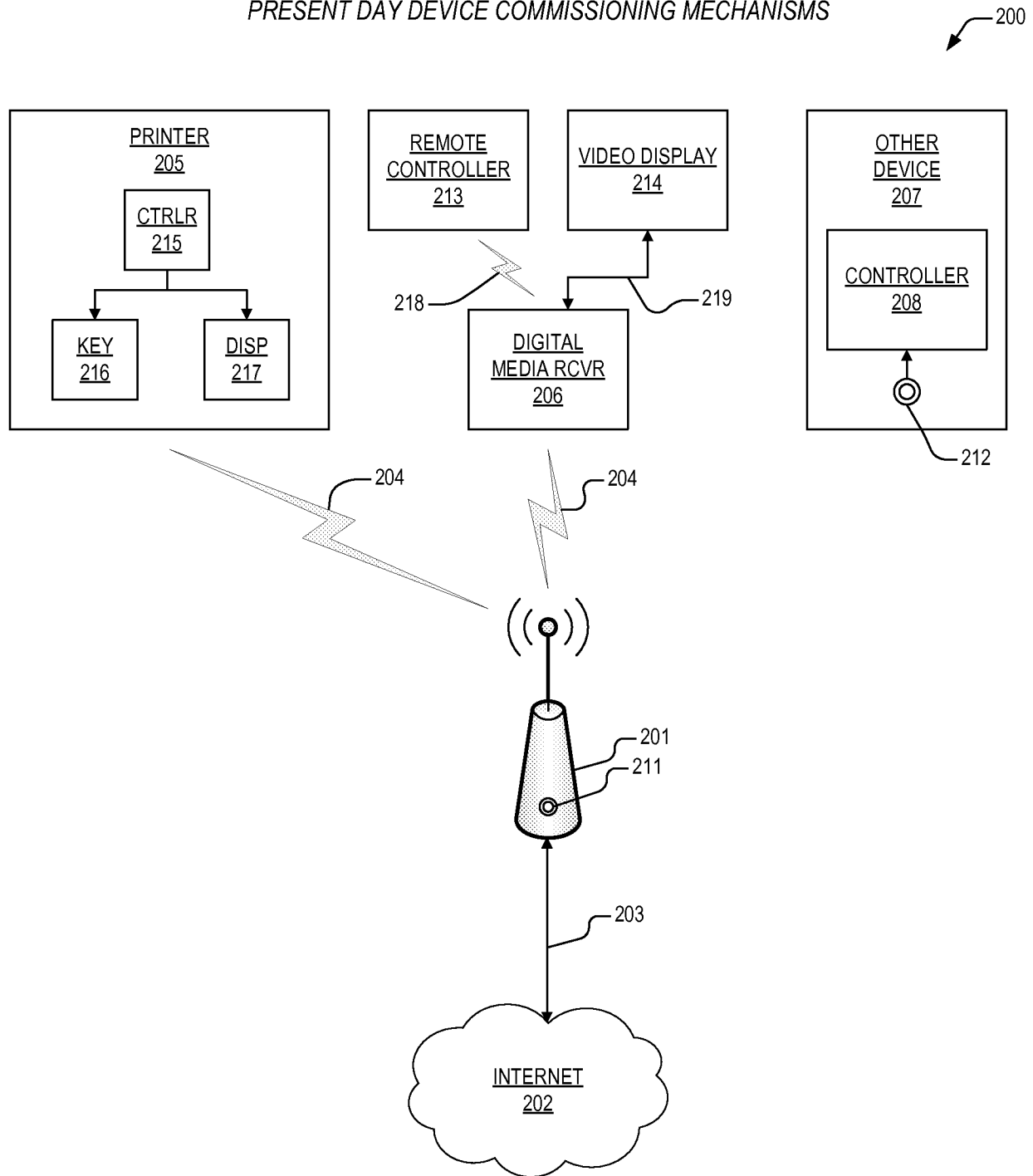


FIG. 3

EXEMPLARY SEAMLESS DEVICE COMMISSIONING TECHNIQUE

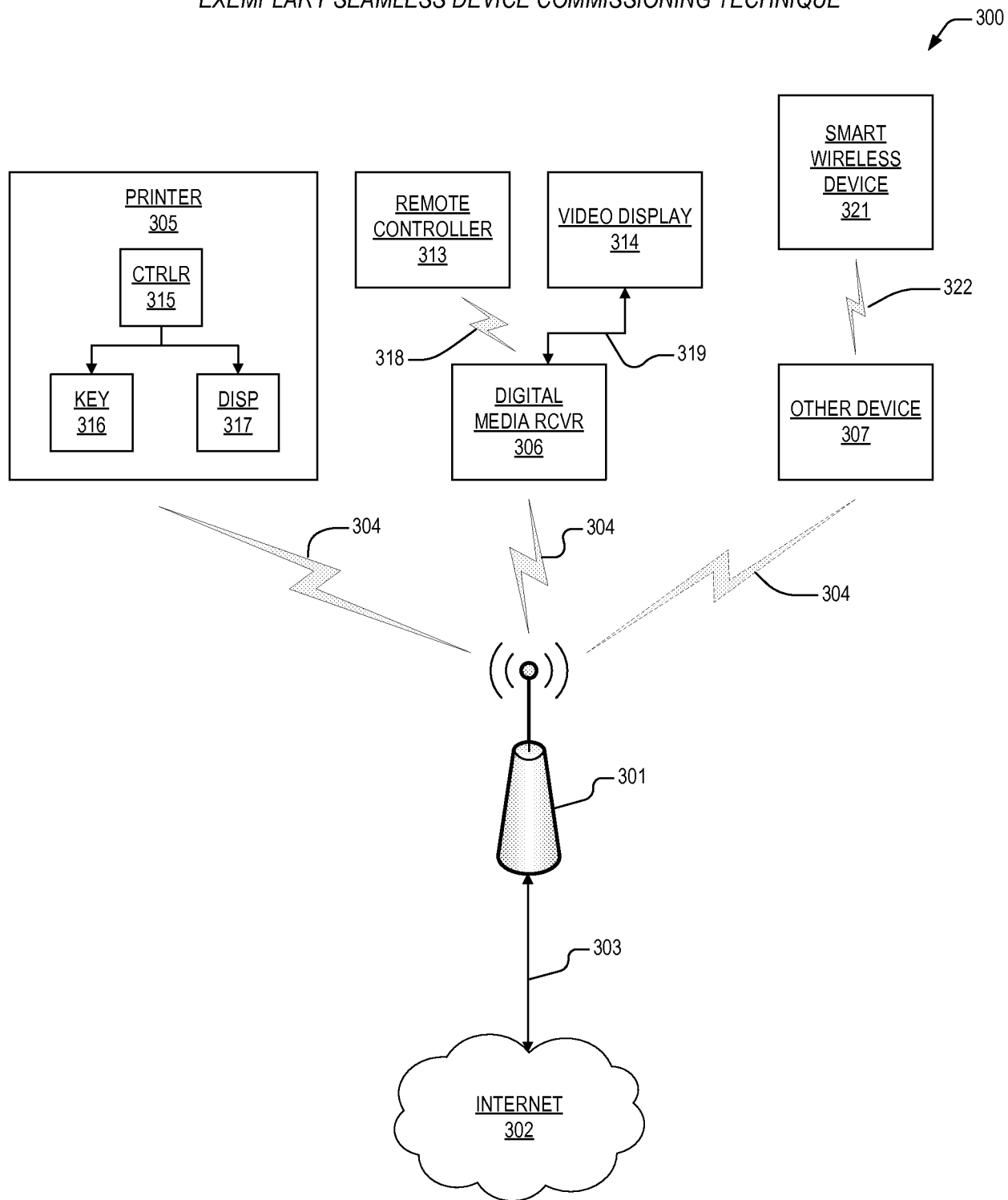


FIG. 4

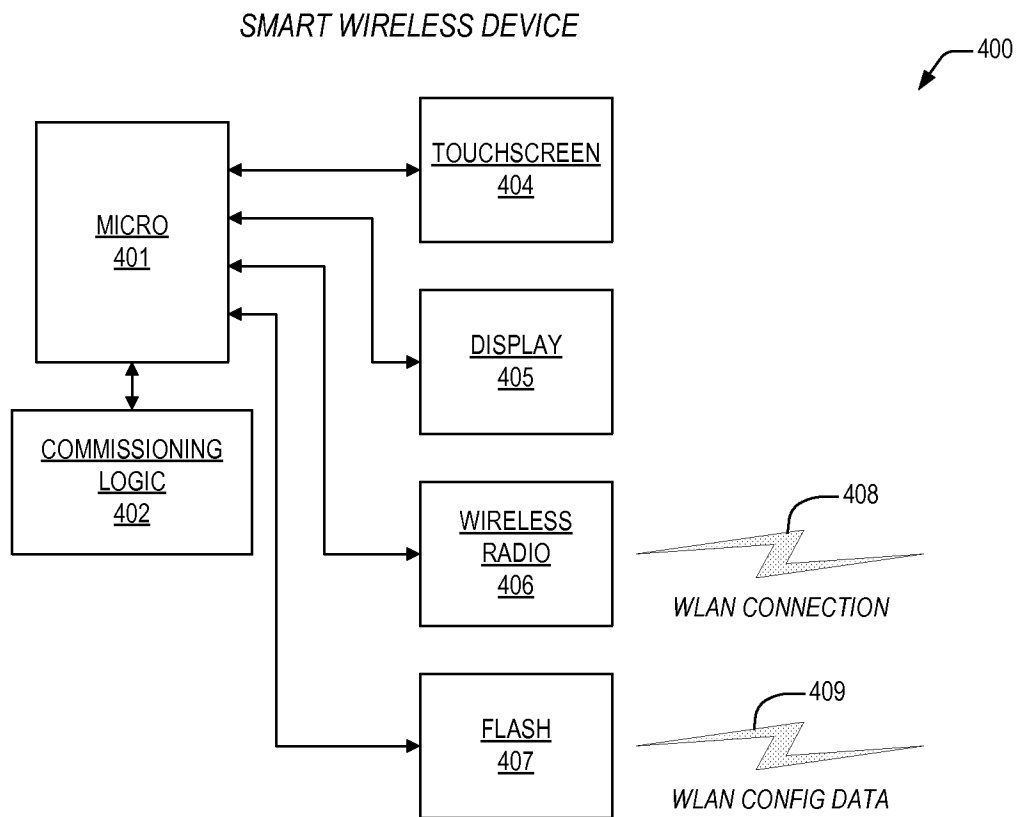


FIG. 5

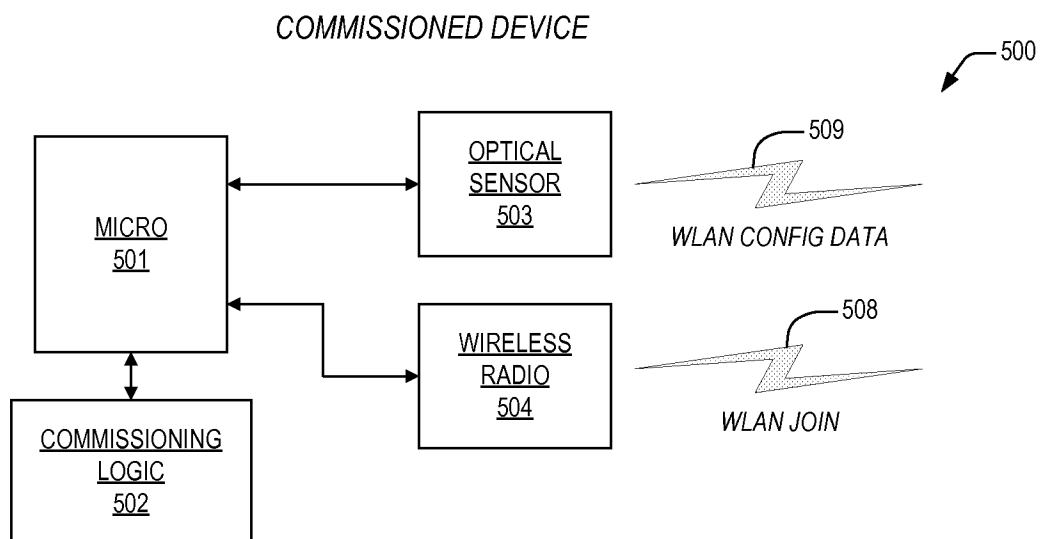


FIG. 6

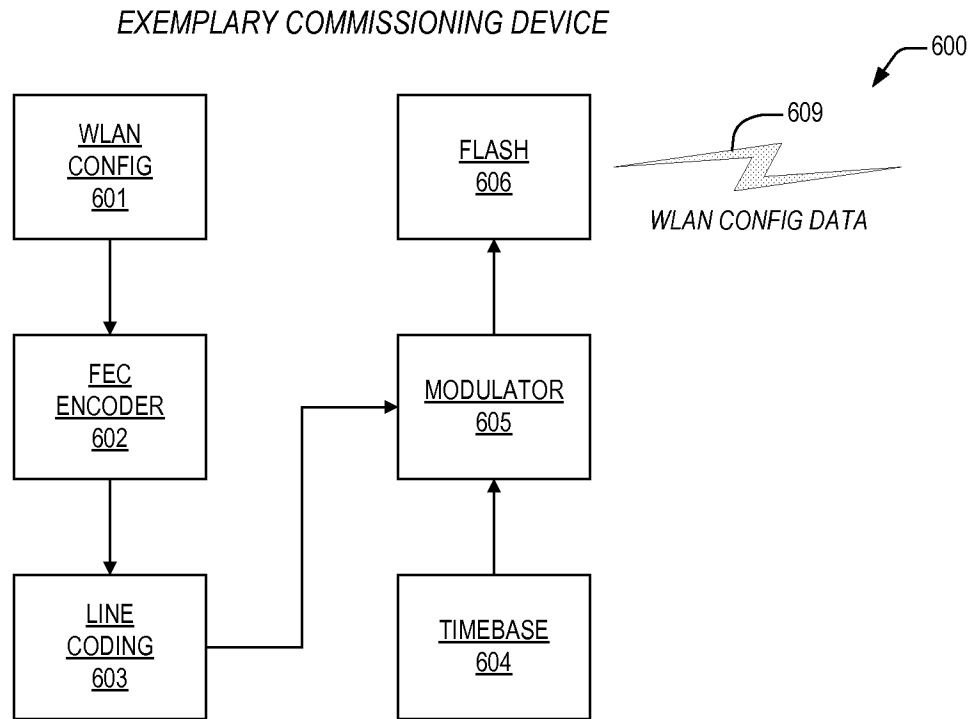


FIG. 7

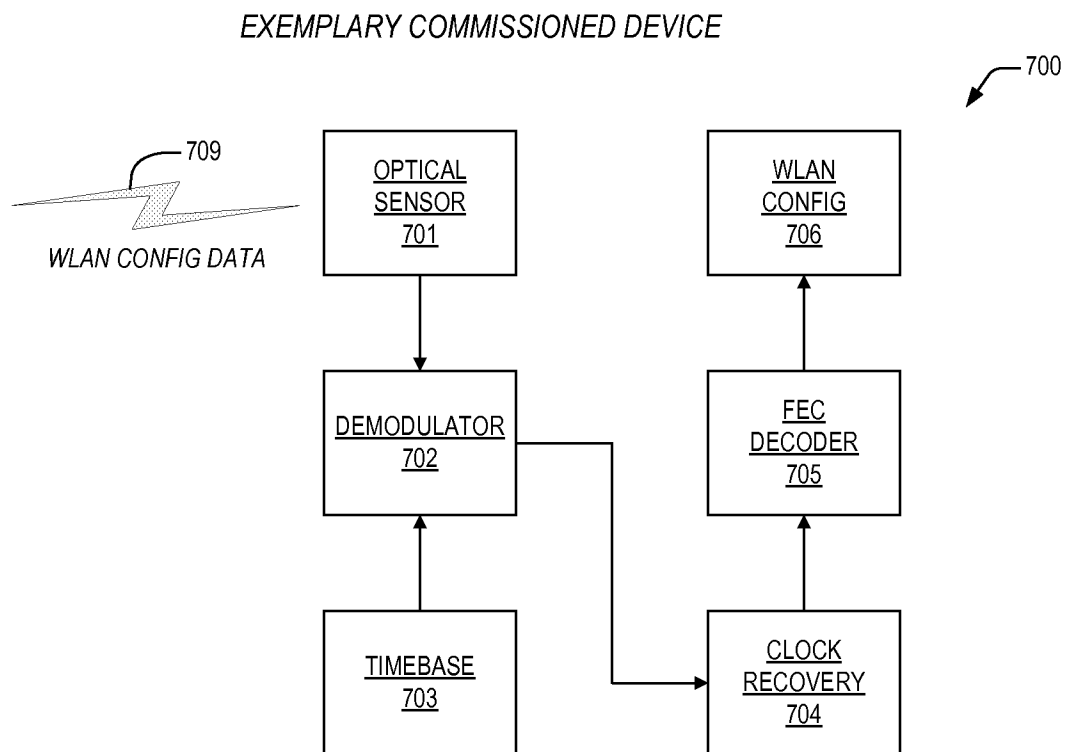
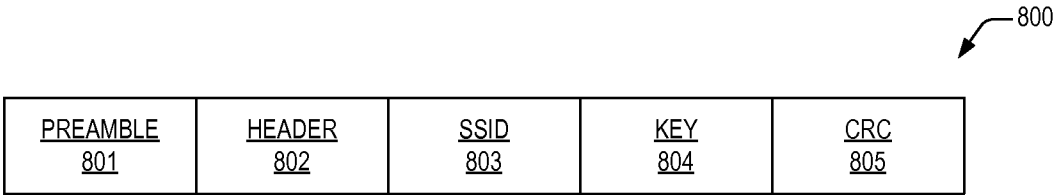


FIG. 8

EXEMPLARY COMMISSIONED DEVICE



Electronic Acknowledgement Receipt	
EFS ID:	37976130
Application Number:	16708189
International Application Number:	
Confirmation Number:	7138
Title of Invention:	Apparatus and Method for Seamless Commissioning of Wireless Devices
First Named Inventor/Applicant Name:	Jeffrey P. Mathews
Customer Number:	82750
Filer:	Douglas James Crisman/Linda Quintana
Filer Authorized By:	Douglas James Crisman
Attorney Docket Number:	104248-5365-US
Receipt Date:	09-DEC-2019
Filing Date:	
Time Stamp:	19:12:50
Application Type:	Utility under 35 USC 111(a)

Payment information:					
Submitted with Payment			no		
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal of New Application	104248-5365-US_Transmittal.pdf	162880	no	1
			4e8d1ab93f6c148ba1a7310e4ef58ac70a5683fa		
Warnings:					

Information:					
2	Assignee showing of ownership per 37 CFR 3.73	104248-5365-US_373c.pdf	101346	no	2
			c4f7f01c1975b9182dc484d680001e267790effd		
Warnings:					
Information:					
3	Power of Attorney	Google_LLC_POA_373c.pdf	56072	no	1
			711c6b4c594884cd60ed417836f88d9440c52a5c		
Warnings:					
Information:					
4	Oath or Declaration filed	104248-5365-US_FullyExecutedDeclaration.pdf	150584	no	2
			dd5d5c4d871954f54d182015060bf5d215819012		
Warnings:					
Information:					
5	Application Data Sheet	104248-5365-US_ADS.pdf	121796	no	9
			1fcd7c27954c99ed7e1df0a4bf2dedf503479d13		
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
6		104248-5365-US_Specification.pdf	271675	yes	20
			2d535ead8868eed1fa09835947763780382116a2		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Abstract		20	20	
	Claims		19	19	
	Specification		1	18	
Warnings:					
Information:					

7	Drawings-only black and white line drawings	104248-5365-US_Figures.pdf	720326	no	6
			e360fb032342117296f8a219b543824674248660		
Warnings:					
Information:					
Total Files Size (in bytes):			1584679		
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/708,189	12/09/2019		0.00	104248-5365-US	1	1

CONFIRMATION NO. 7138

82750

Morgan, Lewis & Bockius LLP (PA)(Google)
1400 Page Mill Road
Palo Alto, CA 94304-1124

FILING RECEIPT



Date Mailed: 01/02/2020

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Inventor(s)

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Lee R. Taylor, Boulder, CO;

Applicant(s)

GOOGLE LLC, Mountain View, CA;

Power of Attorney: The patent practitioners associated with Customer Number 82750

Domestic Priority data as claimed by applicant

This application is a CON of 15/960,337 04/23/2018 PAT 10505797
which is a CON of 15/452,654 03/07/2017 PAT 9998325
which is a CON of 15/159,735 05/19/2016 PAT 9591690
which is a CON of 14/927,406 10/29/2015 PAT 9485790
which is a CON of 13/839,828 03/15/2013 PAT 9198204
which claims benefit of 61/622,620 04/11/2012

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 12/30/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/708,189**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

Apparatus and Method for Seamless Commissioning of Wireless Devices

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 16/708,189				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	300			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	660			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760			
TOTAL CLAIMS (37 CFR 1.16(j))	1	minus 20 = *			OR	x 100 =	0.00			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1	minus 3 = *				x 460 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL		TOTAL	1720			
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.										



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/708,189	12/09/2019	Jeffrey P. Mathews	104248-5365-US

CONFIRMATION NO. 7138

FORMALITIES LETTER



82750
Morgan, Lewis & Bockius LLP (PA)(Google)
1400 Page Mill Road
Palo Alto, CA 94304-1124

Date Mailed: 01/02/2020

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
- The application search fee must be submitted.
- The application examination fee must be submitted.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.

The surcharge is due for any one of:

- late submission of the basic filing fee, search fee, or examination fee,
- late submission of inventor's oath or declaration,
- filing an application that does not contain at least one claim on filing, or
- submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. No entity status discount is in effect. If applicant is qualified for small entity status, a written assertion of small entity status must be submitted to establish small entity status. (See 37 CFR 1.27). If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- \$ 300 basic filing fee.
- \$ 160 surcharge.
- \$ 660 search fee.
- \$ 760 examination fee.
- \$(0) previous unapplied payment amount.
- \$ 1880 TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

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/afessehay/

Electronic Patent Application Fee Transmittal				
Application Number:		16708189		
Filing Date:		09-Dec-2019		
Title of Invention:		Apparatus and Method for Seamless Commissioning of Wireless Devices		
First Named Inventor/Applicant Name:		Jeffrey P. Mathews		
Filer:		Douglas James Crisman/Linda Quintana		
Attorney Docket Number:		104248-5365-US		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	300	300
UTILITY SEARCH FEE	1111	1	660	660
UTILITY EXAMINATION FEE	1311	1	760	760
Pages:				
Claims:				
Miscellaneous-Filing:				
LATE FILING FEE FOR OATH OR DECLARATION	1051	1	160	160
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1880

Electronic Acknowledgement Receipt	
EFS ID:	39153569
Application Number:	16708189
International Application Number:	
Confirmation Number:	7138
Title of Invention:	Apparatus and Method for Seamless Commissioning of Wireless Devices
First Named Inventor/Applicant Name:	Jeffrey P. Mathews
Customer Number:	82750
Filer:	Douglas James Crisman/Linda Quintana
Filer Authorized By:	Douglas James Crisman
Attorney Docket Number:	104248-5365-US
Receipt Date:	14-APR-2020
Filing Date:	09-DEC-2019
Time Stamp:	14:11:06
Application Type:	Utility under 35 USC 111(a)

Payment information:	
Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 1880
RAM confirmation Number	E20204DE11570484
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Response to Pre-Exam Formalities Notice	104248-5365-US_ResponseToNTFMP.pdf	88844	no	2
			15b9655b676cbce78801f2f38925721f1ae51d55		
Warnings:					
Information:					
2	Applicant Response to Pre-Exam Formalities Notice	104248-5365-US_CopyofNTFMP_02-JAN-2020.pdf	71062	no	2
			7de4bb677483253e210e5a77488befde6a5b8b32		
Warnings:					
Information:					
3	Fee Worksheet (SB06)	104248-5365-U\$FeeTransmittal.pdf	105339	no	1
			3dcee97b47c691a6206182ffb6752ab6836e621b		
Warnings:					
Information:					
4	Preliminary Amendment	104248-5365-US_PreliminaryAmendment.pdf	110319	no	7
			8b3e1bbf2b13608617f140e544ec12c3de4cae8e		
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	37536	no	2
			c0542db4511407016f39df793588ba6c656f4792		
Warnings:					
Information:					
Total Files Size (in bytes):			413100		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronically filed April 14, 2020

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Jeffrey P. Mathews et al.	Confirmation No.:	7138
Serial No.:	16/708,189	Art Unit:	To be assigned
Filed:	December 9, 2019	Examiner:	To be assigned
For:	<i>Apparatus and Method for Seamless Commissioning of Wireless Devices</i>	Attorney Docket No.:	104248-5365-US

PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This preliminary amendment is for the application identified above. Please enter this amendment prior to examination on the merits.

IN THE CLAIMS:

Please rewrite the pending claims and add new claims as follows:

1. (Canceled)
2. (New) A method for commissioning a target device onto a communication network, comprising:
 - at the target device including a microprocessor, a wireless radio, and commissioning logic:
 - receiving a request to initiate a commissioning process with the target device;
 - establishing a short-range signal transmission path with a wireless device independently of the communication network;
 - in response to receiving the request, receiving one or more network configuration packets from the wireless device via the short-range signal transmission path, wherein the one or more network configuration packets convey network configuration data associated with the communication network according to a predetermined data format, the network configuration data including at least a security passphrase for accessing the communication network;
 - executing an application on the target device to decode and process the one or more network configuration packets and recover the network configuration data; and
 - after receiving the network configuration packets, employing via the wireless radio the network configuration data conveyed in the one or more network configuration packets to enable the target device to join the communication network.
3. (New) The method of claim 2, wherein the wireless device is selected from a group consisting of a smartphone and a tablet computer.
4. (New) The method of claim 2, wherein information received via the short-range signal transmission path is received at a first wireless radio of the target device, and the first wireless radio employs at least one of a plurality of radio modulation techniques including frequency shift keying (FSK), phase shift keying (PSK), on-off keying (OOK), and quadrature amplitude modulation (QAM).

5. (New) The method of claim 2, wherein the short-range signal transmission path is associated with a communication channel based on a proprietary RF communication standard.
6. (New) The method of claim 2, wherein the short-range signal transmission path is associated with a communication channel based on one of Bluetooth communication, radio frequency identification (RFID), Zigbee, radio frequency for consumer electronics (RF4CE), Z-Wave, and near field communication.
7. (New) The method of claim 2, further comprising:
contacting the wireless device via the communication network to indicate that the target device has successfully entered the communication network.
8. (New) The method of claim 7, further comprising:
after contacting the wireless device, continuing the commission process, including receiving, via the communication network, device configuration data from the wireless device.
9. (New) The method of claim 8, wherein the device configuration data including at least one of an Internet Protocol address, proxy, and gateway configuration.
10. (New) The method of claim 2, further comprising:
generating one of a visual indication and an audio indication to a user about a status of the commissioning process.
11. (New) The method of claim 2, further comprising an application that includes a sequence of program instructions directed towards commissioning the target device onto the communication network.
12. (New) A target device, comprising:
a microprocessor;
a wireless radio;
a commissioning logic; and
a memory storing programs for execution by the target device, the programs further including instructions for:
receiving a request to initiate a commissioning process with the target device;

establishing a short-range signal transmission path with a wireless device independently of a communication network;

in response to receiving the request, receiving one or more network configuration packets from the wireless device via the short-range signal transmission path, wherein the one or more network configuration packets convey network configuration data associated with the communication network according to a predetermined data format, the network configuration data including at least a security passphrase for accessing the communication network;

executing an application on the target device to decode and process the one or more network configuration packets and recover the network configuration data; and

after receiving the network configuration packets, employing via the wireless radio the network configuration data conveyed in the one or more network configuration packets to enable the target device to join the communication network.

13. (New) The target device of claim 12, further comprising an application that includes a sequence of program instructions directed towards commissioning the target device onto the communication network.

14. (New) The target device of claim 12, wherein the short-range signal transmission path includes an audio signal transmission path, and audio signals are modulated to transmit the one or more network configuration packets over the audio signal transmission path to an audio sensor of the target device.

15. (New) The target device of claim 12, wherein the short-range signal transmission path includes a visual signal transmission path, and visual signals are modulated to transmit the one or more network configuration packets over the visual signal transmission path to an optical sensor of the target device.

16. (New) The target device of claim 12, wherein the communication network includes a wireless local area network (WLAN).

17. (New) A non-transitory computer readable storage medium storing one or more programs configured for execution by a target device for commissioning the target device onto a

communication network, the target device including a microprocessor, a wireless radio, and commissioning logic, the one or more programs comprising instructions for:

- receiving a request to initiate a commissioning process with the target device;
- establishing a short-range signal transmission path with a wireless device independently of the communication network;

- in response to receiving the request, receiving one or more network configuration packets from the wireless device via the short-range signal transmission path, wherein the one or more network configuration packets convey network configuration data associated with the communication network according to a predetermined data format, the network configuration data including at least a security passphrase for accessing the communication network;

- executing an application on the target device to decode and process the one or more network configuration packets and recover the network configuration data; and

- after receiving the network configuration packets, employing via the wireless radio the network configuration data conveyed in the one or more network configuration packets to enable the target device to join the communication network.

18. (New) The non-transitory computer readable storage medium of claim 17, wherein the one or more programs further comprise instructions for:

- generating one of a visual indication and an audio indication to a user about a status of the commissioning process.

19. (New) The non-transitory computer readable storage medium of claim 17, further comprising an application that includes a sequence of program instructions directed towards commissioning the target device onto the communication network.

20. (New) The non-transitory computer readable storage medium of claim 17, wherein the one or more programs further comprise instructions for:

- contacting the wireless device via the communication network to indicate that the target device has successfully entered the communication network.

21. (New) The non-transitory computer readable storage medium of claim 20, wherein the one or more programs further comprise instructions for:

after contacting the wireless device, continuing the commission process, including receiving, via the communication network, device configuration data from the wireless device.

REMARKS

Claim 1 has been canceled.

Claims 2-21 have been added.

Support for the amendment and new claims is found in at least paragraphs [0024]-[0063], and Figures 3-8 of the application as filed. No new matter has been added.

The Commissioner is hereby authorized to charge any additional fees associated with this paper communication or credit any overpayment to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (Order no. 104248-5365-US).

Respectfully submitted,

Date: April 14, 2020

/Douglas J. Crisman/

39,951

Douglas J. Crisman

(Reg. No.)

MORGAN, LEWIS & BOCKIUS LLP

1400 Page Mill Road

Palo Alto, CA 94304

(650) 843-4000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Jeffrey P. Mathews et al.	Confirmation No.:	7138
Serial No.:	16/708,189	Art Unit:	Not yet assigned
Filed:	December 9, 2019	Examiner:	Not yet assigned
For:	Apparatus and Method for Seamless Commissioning of Wireless Devices	Attorney Docket No:	104248-5365-US

**RESPONSE TO THE NOTICE TO FILE MISSING PARTS
OF NONPROVISIONAL APPLICATION
WITH PETITION FOR EXTENSION OF TIME**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Notice to File Missing Parts mailed January 2, 2020, enclosed is the Notice to File Missing Parts of Nonprovisional Application for the above-identified application.

An Application Data Sheet was submitted with the application and no changes need to be made.

Also enclosed please find a Fee Transmittal Form setting forth the calculation for the statutory basic filing, search and examination fees, together with the surcharge due in this matter. The fees calculated for the statutory basic filing, search and examination fees together with the surcharge are estimated to be \$1880. The Commissioner is hereby authorized to charge the required fees or credit any overpayments to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104248-5365-US).

Petition for Extension of Time under 37 CFR 1.136. It is respectfully requested that the time for response to the Notice to File Missing Parts dated January 2, 2020 be extended for a period of two months from March 2, 2020 to May 2, 2020. The Commissioner is hereby

authorized to charge any required fee(s) to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104248-5365-US).

Respectfully submitted,

Date: April 14, 2020

<u>/Douglas J. Crisman/</u>	<u>39,951</u>
Douglas J. Crisman	(Reg. No.)
MORGAN, LEWIS & BOCKIUS LLP	
1400 Page Mill Road	
Palo Alto, CA 94304	
(650) 843-4000	



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/708,189	12/09/2019	Jeffrey P. Mathews	104248-5365-US

CONFIRMATION NO. 7138

FORMALITIES LETTER



OC000000113618891

82750
Morgan, Lewis & Bockius LLP (PA)(Google)
1400 Page Mill Road
Palo Alto, CA 94304-1124

Date Mailed: 01/02/2020

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
- The application search fee must be submitted.
- The application examination fee must be submitted.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.

The surcharge is due for any one of:

- late submission of the basic filing fee, search fee, or examination fee,
- late submission of inventor's oath or declaration,
- filing an application that does not contain at least one claim on filing, or
- submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. No entity status discount is in effect. If applicant is qualified for small entity status, a written assertion of small entity status must be submitted to establish small entity status. (See 37 CFR 1.27). If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- \$ **300** basic filing fee.
- \$ **160** surcharge.
- \$ **660** search fee.
- \$ **760** examination fee.
- \$(**0**) previous unapplied payment amount.
- \$ **1880** TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

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/afessehay/

UTILITY PATENT APPLICATION FEE TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR § 1.53(b))</i>	Attorney Docket No.		104248-5365-US
	First Inventor		Jeffrey P. Mathews
	Title		Apparatus and Method for Seamless Commissioning of Wireless Devices
	Electronically filed		April 14, 2020

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BASIC FILING, SEARCH AND EXAMINATION FEES

Application Type	Filing Fees	Search Fees	Examination Fees	Fees Paid (\$)
Utility	\$ 300	\$ 660	\$ 760	\$ 1720

EXCESS CLAIM FEES

Type	No. Filed	Less	Extra	Extra Rate (\$)	Fee (\$)
Total Claims	20	- 20	0	\$ 100 each	\$0
Independent	3	- 3	0	\$ 460 each	\$0
				Multiple Dependency Fee If Applicable (\$820)	\$0

APPLICATION SIZE FEE (Specification and Drawings)

Total Sheets	Extra Sheets	No. of each add'l 50 or fraction thereof	Fee (\$)
26 x .75- 100	0 / 50	0 (round up to whole no.) x \$400	\$0

Sub Total	\$1720
Surcharge	\$ 160
TOTAL FILING FEE	\$1880

Please charge the total filing fee and any other additional fees to Morgan, Lewis & Bockius LLP Deposit Account 50-0310 (order no. 104248-5365-US).

Respectfully submitted,

Date: April 14, 2020

/Douglas J. Crisman/

Douglas J. Crisman
MORGAN, LEWIS & BOCKIUS LLP
1400 Page Mill Road
Palo Alto, CA 94304
(650) 843-4000

39,951
(Reg. No.)



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :C46539

Sale Accounting Date:04/16/2020

Sale Item Reference Number

16708189

Effective Date

04/14/2020

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I20204FD58521656	1252	EXTENSION FOR RESPONSE WITHIN 2ND MONTH	\$600.00	Deposit Account



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/708,189	12/09/2019		1880	104248-5365-US	20	3

CONFIRMATION NO. 7138

UPDATED FILING RECEIPT

82750

Morgan, Lewis & Bockius LLP (PA)(Google)
1400 Page Mill Road
Palo Alto, CA 94304-1124



Date Mailed: 04/20/2020

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Inventor(s)

Jeffrey P. Mathews, Longmont, CO;
Lee R. Taylor, Boulder, CO;

Applicant(s)

GOOGLE LLC, Mountain View, CA;

Power of Attorney: The patent practitioners associated with Customer Number 82750

Domestic Priority data as claimed by applicant

This application is a CON of 15/960,337 04/23/2018 PAT 10505797
which is a CON of 15/452,654 03/07/2017 PAT 9998325
which is a CON of 15/159,735 05/19/2016 PAT 9591690
which is a CON of 14/927,406 10/29/2015 PAT 9485790
which is a CON of 13/839,828 03/15/2013 PAT 9198204
which claims benefit of 61/622,620 04/11/2012

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 12/30/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/708,189**

Projected Publication Date: 07/30/2020

Non-Publication Request: No

Early Publication Request: No

Title

Apparatus and Method for Seamless Commissioning of Wireless Devices

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

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Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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NOT GRANTED

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 16/708,189	
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	300
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	660
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760
TOTAL CLAIMS (37 CFR 1.16(j))	20	minus 20 = *			OR	x 100 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *				x 460 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
			TOTAL			TOTAL	1720
* If the difference in column 1 is less than zero, enter "0" in column 2.							
APPLICATION AS AMENDED - PART II							
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x =	OR	x =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =	OR	x =
	Application Size Fee (37 CFR 1.16(s))					OR	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR	
			TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x =	OR	x =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =	OR	x =
	Application Size Fee (37 CFR 1.16(s))					OR	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR	
			TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.							

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed May 14, 2020	
				Application Number	16/708,189
				Filing Date	December 9, 2019
				First Named Inventor	Jeffrey P. Mathews
				Art Unit	2462
				Examiner Name	Mesfin, Yemane
Sheet	1	of	6	Attorney Docket Number	104248-5365US

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code			
		2002/0016639 A1	02-07-2002	Smith et al.	
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Examiner Signature		Date Considered	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed May 14, 2020	
				Application Number	16/708,189
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				First Named Inventor	Jeffrey P. Mathews
				Art Unit	2462
				Examiner Name	Mesfin, Yemane
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Examiner Signature		Date Considered	
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				Examiner Name	Mesfin, Yemane
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Examiner Signature		Date Considered	
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				Art Unit	2462
				Examiner Name	Mesfin, Yemane
Sheet	4	of	6	Attorney Docket Number	104248-5365US

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Examiner Signature		Date Considered	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed May 14, 2020	
				Application Number	16/708,189
				Filing Date	December 9, 2019
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				Art Unit	2462
				Examiner Name	Mesfin, Yemane
Sheet	5	of	6	Attorney Docket Number	104248-5365US

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
		Detailed Technical Specification of Security for Heterogeneous Access, 31MAY2002, 161 pgs, www.isrc.rhul.ac.uk/shaman/docs/d09v1.pdf
		Google Inc., International Search Report and Written Opinion, PCT/US2015/053291, 05FEB2016, 18 pgs
		Google Inc., International Search Report and Written Opinion, PCT/US2015/060405, 25FEB2016, 9 pgs
		Goadrich, Mark H., and Michael P. Rogers. "Smart smartphone development: iOS versus Android." In Proceedings of the 42nd ACM technical symposium on Computer science education, pp. 607-612. ACM, 2011.

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				First Named Inventor	Jeffrey P. Mathews
				Art Unit	2462
				Examiner Name	Mesfin, Yemane
Sheet	6	of	6	Attorney Docket Number	104248-5365US

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Examiner Signature		Date Considered	
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Electronic Acknowledgement Receipt	
EFS ID:	39443334
Application Number:	16708189
International Application Number:	
Confirmation Number:	7138
Title of Invention:	Apparatus and Method for Seamless Commissioning of Wireless Devices
First Named Inventor/Applicant Name:	Jeffrey P. Mathews
Customer Number:	82750
Filer:	Douglas James Crisman/Lamesha Robertson
Filer Authorized By:	Douglas James Crisman
Attorney Docket Number:	104248-5365-US
Receipt Date:	14-MAY-2020
Filing Date:	09-DEC-2019
Time Stamp:	15:14:26
Application Type:	Utility under 35 USC 111(a)

Payment information:					
Submitted with Payment			no		
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		104248_5365US_IDS.pdf	583988	yes	10
			36bfc8fe3858965e195c0cb31f0179724018cc		

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Transmittal Letter	1	4
	Information Disclosure Statement (IDS) Form (SB08)	5	10
Warnings:			
Information:			
Total Files Size (in bytes):		583988	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.			

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Jeffrey Mathews et al	Confirmation No.:	7138
Serial No.:	16/708,189	Art Unit:	2462
Filed:	December 9, 2019	Examiner:	Mesfin, Yemane
For:	Apparatus and Method for Seamless Commissioning of Wireless Devices	Attorney Docket No.:	104248-5365US

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure provisions of 37 C.F.R. §1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the application.

1. Enclosures accompanying this Information Disclosure Statement are:
 - 1a. ☒ A list of all patents, publications, applications, or other information submitted for consideration by the office.
 - 1b. A legible copy of:
 - ☐ Each foreign patent;
 - ☐ Each publication or that portion which caused it to be listed on the PTO-1449;
 - ☐ For each cited pending U.S. application, the application specification including the claims, and any drawing of the application, or portion of the application which caused it to be listed on the PTO-1449 including any claims directed to that portion;
 - ☐ all other information or portion which caused it to be listed on the PTO-1449.
 - 1c. ☐ An English language copy of search report(s) from a counterpart foreign application or PCT International Search Report.
 - 1d. ☐ Explanations of relevancy (ATTACHMENT 1(d), hereto) or English language abstracts of the non-English language publications.

2. ☒ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(b):
- ☐ Within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
 - ☐ Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
 - ☒ Before the mailing of the first Office action on the merits;
 - ☐ Before the mailing of a first Office action after the filing of a request for continued examination under §1.114.
3. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(c) after the period specified in 37 C.F.R. §1.97(b), but before the mailing date of any of a final action under 37 C.F.R. §1.113, a notice of allowance under 37 C.F.R. §1.311 or an action that otherwise closes prosecution in the application.
- (Check either Item 3a, 3b, 3c or 3d)*
- 3a. ☐ The Certification Statement in Item 5 below is applicable. Accordingly, no fee is required.
- 3b. ☐ The \$240 (large entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no.).
- 3c. ☐ The \$120 (small entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no.).
- 3d. ☐ The \$60 (micro entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no.).

(Items 3b or 3c to be checked if any reference known for more than 3 months)

4. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(d) after the period specified in 37 C.F.R. §1.97(c), but on or before the date of payment of the issue fee.
- (Check Item 4a, and 4b, 4c or 4d)*
- 4a. ☐ The Certification Statement in Item 5 below is applicable.
- 4b. ☐ The \$240 (large entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no.).
- 4c. ☐ The \$120 (small entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no.).
- 4d. ☐ The \$60 (micro entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no.).

5. ☐ Certification Statement (applicable if Item 3a or Item 4a is checked)
- (Check either Item 5a, 5b, 5c or 5d)*
- 5a. ☐ In accordance with 37 C.F.R. §1.97(e)(1), it is certified that each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- 5b. ☐ In accordance with 37 C.F.R. §1.97(e)(2), it is certified that no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this information disclosure statement.
- 5c. ☐ Each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- 5d. ☐ Pursuant to 37 C.F.R. §1.704(d), each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.
6. ☒ Copies of each cited U.S. patent and each U.S. patent application publication are not enclosed pursuant to the USPTO OG Notice dated 05 August 2003 waiving the requirement under 37 C.F.R. 1.98(a)(2)(i) for U.S. patent applications filed after June 30, 2003.
7. ☒ This application is a continuation application under 37 C.F.R. §1.53(b) or (d).
- (Check appropriate Items 7a, 7b and/or 7c)*
- 7a. ☐ A Petition to Withdraw from issue under 37 C.F.R. §1.313(b)(5) is concurrently filed herewith.
- 7b. ☒ Copies of publications listed on Form PTO-1449 from prior application Serial No. 15/960,337, filed on April 23, 2018, 15/452,654, filed on March 7, 2017, 15/159,735, filed on May 19, 2016, 14/927,406, filed on October 29, 2015, and 13/839,828, filed on March 15, 2013, of which this application claims priority under 35 U.S.C. §120, are not being submitted pursuant to 37 C.F.R. §1.98(d).
- 7c. ☐ Copies of the publications listed on the attached Form PTO-1449 that were not previously cited in prior application Serial No. , are provided herewith.
8. ☐ This is a Supplemental Information Disclosure Statement. (Check Item 8a)

- 8a. ☐ This Supplemental Information Disclosure Statement under 37 C.F.R. §1.97(f) supplements the Information Disclosure Statement filed on . A bona fide attempt was made to comply with 37 C.F.R. §1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental Information Disclosure Statement can be considered as if properly filed on .
9. ☐ In accordance with 37 C.F.R. §1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:
- (Check Item 9a, 9b, or 9c)*
- 9a. ☐ satisfied because all non-English language publications were cited on the enclosed English language copy of the PCT International Search Report or the search report from a counterpart foreign application indicating the degree of relevance found by the foreign office.
- 9b. ☐ set forth in the application.
- 9c. ☐ enclosed as an attachment hereto.
10. ☒ The Commissioner is authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement and/or Petition to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104248-5365US).
11. ☒ No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than a search report of a foreign counterpart application or PCT International Search Report if submitted herewith). 37 C.F.R. §§1.97(g) and (h).

Respectfully submitted,

Date: May 14, 2020

/ Douglas J. Crisman /	39,951
Douglas J. Crisman	(Reg. No.)
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UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/708,189	12/09/2019	Jeffrey P. Mathews	104248-5365-US

CONFIRMATION NO. 7138

82750
Morgan, Lewis & Bockius LLP (PA)(Google)
1400 Page Mill Road
Palo Alto, CA 94304-1124

PUBLICATION NOTICE



OC000000118848907

Title:Apparatus and Method for Seamless Commissioning of Wireless Devices

Publication No.US-2020-0244522-A1

Publication Date:07/30/2020

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <https://portal.uspto.gov/pair/PublicPair>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/708,189	12/09/2019	Jeffrey P. Mathews	104248-5365-US	7138
82750	7590	08/20/2020	EXAMINER	
Morgan, Lewis & Bockius LLP (PA)(Google)			MASUR, PAUL H	
1400 Page Mill Road			ART UNIT	
Palo Alto, CA 94304-1124			PAPER NUMBER	
			2464	
			NOTIFICATION DATE	
			DELIVERY MODE	
			08/20/2020	
			ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

padocketingdepartment@morganlewis.com
vskliba@morganlewis.com

DETAILED ACTION

1. **Claims 2-21 are pending.** Claim 1 was cancelled and claims 2-21 were added via preliminary amendment.

Notice of Pre-AIA or AIA Status

2. **The present application is being examined under the pre-AIA first to invent provisions.**

Information Disclosure Statement

3. **The information disclosure statement (IDS) submitted on 5/14/2020 was filed.** The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Double Patenting

4. **The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees.** A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application,

or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(I)(1) - 706.02(I)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

5. **Claims 2-11 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 9,485,790.** Although the claims at issue are not identical, they are not patentably distinct from each other because the applicant's claim in the instant application merely broadens the scope of the conflicting claims in the U.S. Patent by omitting claimed subject matter. However, claim 1 of U.S. Patent 9,485,790 additionally recites a wireless local area network (WLAN) and WLAN configuration data.

It has been held, that omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ 184 (CCPA). Also note *Ex parte Rainu*, 168 USPQ 375 (Bd. App. 1969) (omission of a reference element whose function is not needed would be obvious to one skilled in the art). Therefore, it would have been obvious to one skilled in the art before the effective filing date of the claimed invention to not recite the additional limitation(s).

6. **Claims 2 is rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 of U.S. Patent No. 9,198,204.** Although the claims at issue are not identical, they are not patentably distinct from each other because the claimed target device of the instant application performs operations that directly interact with the smart wireless device of the U.S. Patent.

7. **Claims 12, 13, and 16 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 9 and 11 of U.S. Patent No. 9,485,790.** Although the claims at issue are not identical, they are not patentably distinct from each other because the applicant's claim in the instant application merely broadens the scope of the conflicting claims in the U.S. Patent by omitting claimed subject matter. However, claim 9 of U.S. Patent 9,485,790 additionally recites a wireless local area network (WLAN) and WLAN configuration data.

It has been held, that omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ 184 (CCPA). Also note *Ex parte Rainu*, 168 USPQ 375 (Bd. App. 1969) (omission of a reference element whose function is not needed would be obvious to one skilled in the art). Therefore, it would have been obvious to one skilled in the art before the effective filing date of the claimed invention to not recite the additional limitation(s).

8. **Claims 12 and 13-15 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 8, 11, 12, and 14 of U.S. Patent No. 9,198,204.** Although the claims at issue are not identical, they are not patentably distinct from each other because the claimed target device of the instant application performs operations that directly interact with the smart wireless device of the U.S. Patent.

9. **Claims 17, 18, and 19 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 15, 18, 20, and 21 of U.S. Patent No. 9,198,204.** Although the claims at issue are not identical, they are not patentably distinct from each other because the claimed target device of

the instant application performs operations that directly interact with the smart wireless device of the U.S. Patent.

10. **Claims 17, 20, and 21 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 16 and 20 of U.S. Patent No. 9,485,790.** Although the claims at issue are not identical, they are not patentably distinct from each other because the applicant's claim in the instant application merely broadens the scope of the conflicting claims in the U.S. Patent by omitting claimed subject matter. However, claim 16 of U.S. Patent 9,485,790 additionally recites a wireless local area network (WLAN) and WLAN configuration data.

It has been held, that omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ 184 (CCPA). Also note *Ex parte Rainu*, 168 USPQ 375 (Bd. App. 1969) (omission of a reference element whose function is not needed would be obvious to one skilled in the art). Therefore, it would have been obvious to one skilled in the art before the effective filing date of the claimed invention to not recite the additional limitation(s).

Examiner's Comments Regarding the Art of Record

11. **The examiner particularly notes that the cited references Economy et al. (US PG Pub 2013/0026947, cited on IDS dated 5/14/2020) and Tinnakornsriruphap et al. (US PG Pub 2013/0223279, see accompanying PTO-892) are particularly relevant to the claims.** However, the examiner notes that the two references are not combinable at least due to their differing structures.

Economy et al. teaches the interaction between a wireless control device (see fig. 1, element 120), dimmer switch (see fig. 1, element 110), and wireless router (see fig. 1, element 130). Economy's wireless control device exchanges information with the dimmer switch in order for the dimmer switch to connect with the wireless router (see Economy, ¶s 0072 and 0079). The dimmer switch of Economy further controls the bulb (see fig. 1, element 104, and ¶ 0038).

In addition, Tinnakornsriruphap et al. teaches the use of a mobile device (see figs. 4/5, element 404/504), a smart appliance (see figs. 4/5, elements 406/506), and a WLAN access point (see figs. 4/5, elements 402/502). The reference further teaches Li-Fi and audio methods for the mobile device to configure the smart appliance to communicate with the WLAN router (see ¶s 0023 and 0024).

The examiner notes that the structure of the dimmer switch of Economy and the smart appliance of Tinnakornsriruphap et al. (see fig. 4, element 406) are fundamentally different. The electrical/mechanical differences between a smart bulb and a smart switch would amount to undue experimentation and therefore be non-obvious to combine (see MPEP 2121.01 and 2141.01(a)(V)). In addition, it is unclear how incorporating the features of Tinnakornsriruphap et al. into Economy et al. would provide sufficient motivation to combine the references (see MPEP 2143.01). The dimmer switch of Economy et al. may control multiple lighting loads (see ¶ 0038), whereas the smart appliance of Tinnakornsriruphap et al. is a single light source (see ¶ 0023). Therefore, the examiner does not find a motivation to combine the structure of multi-lighting load system with a single lighting load system, since such a combination appears inefficient and counter-intuitive to one of ordinary skill in the art. Based on at least this reasoning, the examiner finds the claims to be non-obvious over Economy et al. and Tinnakornsriruphap et al.

Conclusion

12. **Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL H. MASUR whose telephone number is (571)270-7297.** The examiner can normally be reached on Monday to Friday, 6 AM to 3 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Date: 8/17/2020
/PAUL H MASUR/
Primary Examiner, Art Unit 2464

<i>Notice of References Cited</i>	Application/Control No. 16/708,189		Applicant(s)/Patent Under Reexamination Mathews et al.	
	Examiner PAUL H MASUR		Art Unit 2464	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20130223279-A1	08-2013	Tinnakomsrisuphap; Peerapol	H04W12/04	370/254
	B					
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Search Notes</i> 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

CPC - Searched*		
Symbol	Date	Examiner
H04W84/18	08/14/2020	/P.H.M/
H04W4/005,008	08/14/2020	/P.H.M/
H04W84/12	08/14/2020	/P.H.M/
H04L41/0803,0806	08/14/2020	/P.H.M/
H04B10/116	08/14/2020	/P.H.M/
H04W84/12,18	08/14/2020	/P.H.M/
H04W4/70	08/14/2020	/P.H.M/
H04W4/80	08/14/2020	/P.H.M/
H04W76/10	08/14/2020	/P.H.M/

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/P.H.M/ Primary Examiner, Art Unit 2464	
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<i>Search Notes</i> 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

Search Notes		
Search Notes	Date	Examiner
Considered file wrapper history of patent family	08/14/2020	/P.H.M/
Inventor name search	08/14/2020	/P.H.M/
Considered IDS documents	08/14/2020	/P.H.M/
Text and and classification search	08/14/2020	/P.H.M/
CPC subgroups - limited by text	08/14/2020	/P.H.M/
Databases Used: uspat, us-pgpub, fprs, epo, jpo, derwent, ibm_tdb	08/14/2020	/P.H.M/
Ip.com (NPL & Patent search) - see attached	08/17/2020	/P.H.M/

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/P.H.M/ Primary Examiner, Art Unit 2464	
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<i>Index of Claims</i> 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	08/17/2020								
	1	-								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								
	16	✓								
	17	✓								
	18	✓								
	19	✓								
	20	✓								
	21	✓								

Bibliographic Data

Application No: 16/708,189

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged:

/PAUL H MASUR/

Examiner's Signature

Initials

Title:

Apparatus and Method for Seamless Commissioning of Wireless Devices

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/09/2019	709	2464	104248-5365-US
RULE			

APPLICANTS

GOOGLE LLC, Mountain View, CA, UNITED STATES

INVENTORS

Jeffrey P. Mathews, Longmont, CO, UNITED STATES

Lee R. Taylor, Boulder, CO, UNITED STATES

CONTINUING DATA

This application is a CON of 15960337 04/23/2018 PAT 10505797
15960337 is a CON of 15452654 03/07/2017 PAT 9998325
15452654 is a CON of 15159735 05/19/2016 PAT 9591690
15159735 is a CON of 14927406 10/29/2015 PAT 9485790
14927406 is a CON of 13839828 03/15/2013 PAT 9198204
13839828 has PRO of 61622620 04/11/2012

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

12/30/2019

STATE OR COUNTRY

UNITED STATES

ADDRESS

Morgan, Lewis & Bockius LLP (PA)(Google)
1400 Page Mill Road
Palo Alto, CA 94304-1124
UNITED STATES

FILING FEE RECEIVED

\$1,880

Main Concept Text

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a method for wireless local area network (WLAN) device commissioning. The method includes: executing a first application on a smart wireless device to format and direct transmission of one or more WLAN packets; via a first transducer of the smart wireless device, transmitting the one or more WLAN configuration packets over a transmission path, where the first transducer is an existing component of the smart wireless device; via a second transducer disposed within a target device, receiving the one or more WLAN configuration packets; executing a second application on the target device to decode and process the one or more WLAN configuration packets to recover WLAN configuration data; and via a wireless radio disposed within the target device, employing the WLAN configuration data to enable the target device to join a WLAN.

(No Concept Modifiers)

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(No Filters)

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Options

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De-dup: None

Cut-off: None

Sort: Relevance

Content: Non-Patent Literature (25)

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IEEE Xplore Publications: IEEE Periodicals
 IEEE Xplore Publications: IEEE Conferences
 IEEE Xplore Publications: IEEE Standards
 IEEE Xplore Publications: IEEE Early Access
 IEEE Xplore Publications: IET Periodicals
 IEEE Xplore Publications: IET Conferences
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Other Literature: IBM Redbooks

Other Literature: PubMed Central

Main Concept Text

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a method for wireless local area network (WLAN) device commissioning. The method includes: executing a first application on a smart wireless device to format and direct transmission of one or more WLAN packets; via a first transducer of the smart wireless device, transmitting the one or more WLAN configuration packets over a transmission path, where the first transducer is an existing component of the smart wireless device; via a second transducer disposed within a target device, receiving the one or more WLAN configuration packets; executing a second application on the target device to decode and process the one or more WLAN configuration packets to recover WLAN configuration data; and via a wireless radio disposed within the target device, employing the WLAN configuration data to enable the target device to join a WLAN.

(No Concept Modifiers)

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Filters (1)

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Earliest Priority Date: To 2012-04-10

Options

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De-dup: None

Cut-off: None

Sort: Relevance

Content: Patent Publications (164)

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US Patents

US Designs

US Applications

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China Patents

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Japan Patents

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Switzerland Applications
Ukraine Patents

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Yugoslavia/Serbia and Montenegro Applications
Armenia Patents
Australia Patents
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Gulf Cooperation Council Patents
Hong Kong Patents
India Patents
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Israel Applications
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Tunisia Applications
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Zimbabwe Patents
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Russia Applications
Turkey Patents
Turkey Applications

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S513	99	((Jeffrey) near2 (Mathews)).INV.	US-PGPUB; USPAT	OR	ON	2020/08/14 12:08
S514	116	((Lee) near2 (Taylor)).INV.	US-PGPUB; USPAT	OR	ON	2020/08/14 12:08
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S543	160,308	H04W84/12,18.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2020/08/14 14:20

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S544	2,659	S536 and S543	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/08/14 14:20
S545	49,815	H04W4/70.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/08/14 14:20
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S547	4	S546 and (@pd<"20120411" or @ad<"20120411" or @prad<"20120411" or @rlad<"20120411" or @ptad<"20120411")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/08/14 14:20
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S549	224	S544 and S548	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/08/14 14:20
S550	31	S549 and (@pd<"20120411" or @ad<"20120411" or @prad<"20120411" or @rlad<"20120411" or @ptad<"20120411")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/08/14 14:20
S551	59,617	H04W76/10.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2020/08/14 14:20

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S552	358	S544 and S551	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/08/14 14:20
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				Application Number	16/708,189
				Filing Date	December 9, 2019
				First Named Inventor	Jeffrey P. Mathews
				Art Unit	2462
				Examiner Name	Mesfin, Yemane
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Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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Examiner Signature	/PAUL H MASUR/	Date Considered	08/17/2020
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed May 14, 2020	
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				First Named Inventor	Jeffrey P. Mathews
				Art Unit	2462
				Examiner Name	Mesfin, Yemane
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Examiner Signature	/PAUL H MASUR/	Date Considered	08/17/2020
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DB2/ 22684197.4

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed May 14, 2020			
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				Art Unit		2462	
				Examiner Name		Mesfin, Yemane	
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Examiner Signature	/PAUL H MASUR/	Date Considered	08/17/2020
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				Art Unit	2462
				Examiner Name	Mesfin, Yemane
Sheet	4	of	6	Attorney Docket Number	104248-5365US

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Examiner Signature	/PAUL H MASUR/	Date Considered	08/17/2020
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DB2/ 22684197.4

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed May 14, 2020	
				Application Number	16/708,189
				Filing Date	December 9, 2019
				First Named Inventor	Jeffrey P. Mathews
				Art Unit	2462
Examiner Name	Mesfin, Yemane				
Sheet	5	of	6	Attorney Docket Number	104248-5365US

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Examiner Initials	Cite No.	Foreign Patent Document Country Code – Number – Kind Code (<i>if known</i>)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T

NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
		Detailed Technical Specification of Security for Heterogeneous Access, 31MAY2002, 161 pgs, www.isrc.rhul.ac.uk/shaman/docs/d09v1.pdf
		Google Inc., International Search Report and Written Opinion, PCT/US2015/053291, 05FEB2016, 18 pgs
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Examiner Signature	/PAUL H MASUR/	Date Considered	08/17/2020
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DB2/ 22684197.4

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed May 14, 2020			
				Application Number		16/708,189	
				Filing Date		December 9, 2019	
				First Named Inventor		Jeffrey P. Mathews	
				Art Unit		2462	
				Examiner Name		Mesfin, Yemane	
Sheet	6	of	6	Attorney Docket Number		104248-5365US	

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Examiner Signature	/PAUL H MASUR/	Date Considered	08/17/2020
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DB2/ 22684197.4

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 25, 2020	
				Application Number	16/708,189
				Filing Date	December 9, 2019
				First Named Inventor	Jeffrey P. Mathews
				Art Unit	2464
				Examiner Name	Masur, Paul H.
Sheet	1	of	1	Attorney Docket Number	104248-5365US

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	Document Number Number - Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document Country Code – Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
NON PATENT LITERATURE DOCUMENTS						
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published				
		Google Inc., International Preliminary Report on Patentability, PCT/US2015/060405, 16MAY2017, 7 pgs.				
		Google Inc., International Preliminary Report on Patentability, PCT/US2015/053291, 04APR2017, 14 pgs.				

Examiner Signature		Date Considered	
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C:\Users\mp073238\Documents\104248-5365US\List of
References Form 1449 (5365US).docx

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Jeffrey P. Mathews et al	Confirmation No.:	7138
Serial No.:	16/708,189	Art Unit:	2464
Filed:	December 9, 2019	Examiner:	Masur, Paul H.
For:	Apparatus and Method for Seamless Commissioning of Wireless Devices	Attorney Docket No.:	104248-5365US

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure provisions of 37 C.F.R. §1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the application.

1. Enclosures accompanying this Information Disclosure Statement are:
 - 1a. ☒ A list of all patents, publications, applications, or other information submitted for consideration by the office.
 - 1b. A legible copy of:
 - ☐ Each foreign patent;
 - ☐ Each publication or that portion which caused it to be listed on the PTO-1449;
 - ☐ For each cited pending U.S. application, the application specification including the claims, and any drawing of the application, or portion of the application which caused it to be listed on the PTO-1449 including any claims directed to that portion;
 - ☒ all other information or portion which caused it to be listed on the PTO-1449.
 - 1c. ☐ An English language copy of search report(s) from a counterpart foreign application or PCT International Search Report.
 - 1d. ☐ Explanations of relevancy (ATTACHMENT 1(d), hereto) or English language abstracts of the non-English language publications.
2. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(b):
 - ☐ Within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);

- ☐ Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
- ☐ Before the mailing of the first Office action on the merits;
- ☐ Before the mailing of a first Office action after the filing of a request for continued examination under §1.114.
3. ☒ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(c) after the period specified in 37 C.F.R. §1.97(b), but before the mailing date of any of a final action under 37 C.F.R. §1.113, a notice of allowance under 37 C.F.R. §1.311 or an action that otherwise closes prosecution in the application.

(Check either Item 3a, 3b, 3c or 3d)

- 3a. ☐ The Certification Statement in Item 5 below is applicable. Accordingly, no fee is required.
- 3b. ☒ The \$240 (large entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104248-5365US).
- 3c. ☐ The \$120 (small entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no.).
- 3d. ☐ The \$60 (micro entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no.).

(Items 3b or 3c to be checked if any reference known for more than 3 months)

4. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(d) after the period specified in 37 C.F.R. §1.97(c), but on or before the date of payment of the issue fee.

(Check Item 4a, and 4b, 4c or 4d)

- 4a. ☐ The Certification Statement in Item 5 below is applicable.
- 4b. ☐ The \$240 (large entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no.).
- 4c. ☐ The \$120 (small entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no.).
- 4d. ☐ The \$60 (micro entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no.).

5. ☐ Certification Statement (applicable if Item 3a or Item 4a is checked)

(Check either Item 5a, 5b, 5c or 5d)

- 5a. ☐ In accordance with 37 C.F.R. §1.97(e)(1), it is certified that each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- 5b. ☐ In accordance with 37 C.F.R. §1.97(e)(2), it is certified that no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this information disclosure statement.
- 5c. ☐ Each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- 5d. ☐ Pursuant to 37 C.F.R. §1.704(d), each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.
6. ☐ Copies of each cited U.S. patent and each U.S. patent application publication are not enclosed pursuant to the USPTO OG Notice dated 05 August 2003 waiving the requirement under 37 C.F.R. 1.98(a)(2)(i) for U.S. patent applications filed after June 30, 2003.
7. ☐ This application is a continuation application under 37 C.F.R. §1.53(b) or (d).
(Check appropriate Items 7a, 7b and/or 7c)
- 7a. ☐ A Petition to Withdraw from issue under 37 C.F.R. §1.313(b)(5) is concurrently filed herewith.
- 7b. ☐ Copies of publications listed on Form PTO-1449 from prior application Serial No. _____, filed on _____, of which this application claims priority under 35 U.S.C. §120, are not being submitted pursuant to 37 C.F.R. §1.98(d).
- 7c. ☐ Copies of the publications listed on the attached Form PTO-1449 that were not previously cited in prior application Serial No. _____, filed on _____, are provided herewith.
8. ☐ This is a Supplemental Information Disclosure Statement. (Check Item 8a)
- 8a. ☐ This Supplemental Information Disclosure Statement under 37 C.F.R. §1.97(f) supplements the Information Disclosure Statement filed on _____. A bona fide attempt was made to comply with 37 C.F.R. §1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental Information Disclosure Statement can be considered as if properly filed on _____.

9. ☐ In accordance with 37 C.F.R. §1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:

(Check Item 9a, 9b, or 9c)

- 9a. ☐ satisfied because all non-English language publications were cited on the enclosed English language copy of the PCT International Search Report or the search report from a counterpart foreign application indicating the degree of relevance found by the foreign office.
- 9b. ☐ set forth in the application.
- 9c. ☐ enclosed as an attachment hereto.
10. ☒ The Commissioner is authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement and/or Petition to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104248-5365US).
11. ☒ No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than a search report of a foreign counterpart application or PCT International Search Report if submitted herewith). 37 C.F.R. §§1.97(g) and (h).

Respectfully submitted,

Date: August 25, 2020

/ Douglas J. Crisman /	39,951
Douglas J. Crisman	(Reg. No.)
MORGAN, LEWIS & BOCKIUS LLP	
1400 Page Mill Road	
Palo Alto, CA 94304	
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 104248-5038WO	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2015/060405	International filing date (day/month/year) 12 November 2015 (12.11.2015)	Priority date (day/month/year) 12 November 2014 (12.11.2014)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant GOOGLE INC.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:



Box No. I

Basis of the report



Box No. II

Priority



Box No. III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability



Box No. IV

Lack of unity of invention



Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement



Box No. VI

Certain documents cited



Box No. VII

Certain defects in the international application



Box No. VIII

Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

	Date of issuance of this report 16 May 2017 (16.05.2017)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Lingfei Bai e-mail: pct.team2@wipo.int

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:
CRISMAN, DOUGLAS J.

MORGAN LEWIS & BOCKIUS LLP 2 PALO ALTO
SQUARE 3000 EL CAMINO REAL, SUITE 700 PALO
ALTO CA 94306 USA

Date of mailing
(day/month/year) **25 February 2016 (25.02.2016)**

Applicant's or agent's file reference
104248-5038WO

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/US2015/060405

International filing date (day/month/year)
12 November 2015 (12.11.2015)

Priority date(day/month/year)
12 November 2014 (12.11.2014)

International Patent Classification (IPC) or both national classification and IPC
H04L 12/24(2006.01)i, H04L 12/12(2006.01)i, H04L 12/28(2006.01)i

Applicant
GOOGLE INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR
International Application Division
Korean Intellectual Property Office
189 Cheongsu-ro, Seo-gu, Daejeon,
35208, Republic of Korea
Facsimile No. +82-42-472-7140



Date of completion of this opinion

25 February 2016 (25.02.2016)

Authorized officer

COMMISSIONER

Telephone No. +82-42-481-5916



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2015/060405

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
- a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2015/060405

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-20	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 2002-0016639 A1 (MARJORIE L. SMITH et al.) 07 February 2002
D2: US 2003-0169728 A1 (MOON-JEONG CHOI) 11 September 2003
D3: US 2006-0259183 A1 (PATRICK H. HAYES et al.) 16 November 2006
D4: US 2006-0174102 A1 (ERIC SMITH et al.) 03 August 2006
D5: US 2013-0041516 A1 (UWE ROCKENFELLER et al.) 14 February 2013

1. Novelty and Inventive Step

1.1 Claims 1-18

1.1.1 Independent Claim 1

The subject matter of claim 1 differs from these prior art documents in that a method of claim 1 comprises: receiving a first command for performing a first functionality on at least a second device, the first functionality comprising a plurality of constituent functionalities, wherein the second device is not configured to execute the first command; translating the first command into a plurality of sub-commands, wherein execution of any one of the plurality of sub-commands individually does not perform an entire first functionality; and managing execution of the plurality of sub-commands by respective devices, wherein execution of the plurality of sub-commands emulates performance of the first functionality on at least the second device. And it is not obvious to a person skilled in the art over the documents (D1-D5), taken alone or in combination. Therefore, claim 1 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

1.1.2 Dependent Claims 2-18

Continued on Supplemental Box

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2015/060405

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claims 8-9, 17-18, and 20 do not comply with the third sentence of PCT Rule 6.4(a), because multiple dependent claims should not serve as a basis for any other multiple dependent claim.

(Note: The international search report and the written opinion have been established on the assumption that: claim 8 refers to claim 2 because the phrase "the predetermined schedule" in claim 8 is worded in claim 2; claim 9 refers to claim 8 because the phrase "the predetermined schedule" and the word "the week" in claim 9 are worded in claim 8; and claims 17-18 and 20 refer to claim 1 because the features of claims 17-18 and 20 can be referred by claim 1.)

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Claim 1 is unclear because “the entire first functionality” has not been previously defined. Therefore, claim 1 does not meet the requirement of PCT Article 6.
(Note: This written opinion has been established on the following assumption: the phrase “the entire first functionality” in claim 1 is regarded as “an entire first functionality”.)
2. Claim 3 is unclear because “the sunrise or sunset conditions” has not been previously defined. Therefore, claim 3 does not meet the requirement of PCT Article 6.
(Note: This written opinion has been established on the following assumption: the phrase “the sunrise or sunset conditions” in claim 3 is regarded as “the sunrise or sunset condition”.)
3. Claim 5 is unclear because “the cooling or heating functionality” has not been previously defined. Therefore, claim 5 does not meet the requirement of PCT Article 6.
(Note: This written opinion has been established on the following assumption: the phrase “the cooling or heating functionality” in claim 5 is regarded as “a cooling or heating functionality”.)
4. Claim 6 is unclear because “the locking or unlocking of the lock device” has not been previously defined. Therefore, claim 6 does not meet the requirement of PCT Article 6.
(Note: This written opinion has been established on the following assumption: the phrase “a locking or unlocking of the lock device” in claim 6 is regarded as “a locking or unlocking of the lock device”.)
5. Claim 8 is unclear because “the week” has not been previously defined. Therefore, claim 8 does not meet the requirement of PCT Article 6.
(Note: This written opinion has been established on the following assumption: the word “the week” in claim 8 is regarded as “a week”.)
6. A period in claim 11 is left out at the end of the sentence. Therefore, claim 11 does not meet the requirement of PCT Article 6.
(Note: The international search report and the written opinion have been established on the assumption that a period in claim 11 should be put at the end of the sentence.)

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of : Box No. V

Claims 2-18 are directly or indirectly dependent on claim 1 and therefore meet the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

1.2 Claim 19

1.2.1 Independent Claim 19

The subject matter of claim 19 differs from these prior art documents in that a method of claim 19 comprises: identifying a first functionality to be performed on a first device, the first functionality comprising a plurality of constituent functionalities; and generating a plurality of sub-commands, wherein execution of the plurality of sub-commands emulates performance of the first functionality on at least the first device. And it is not obvious to a person skilled in the art over the documents (D1-D5), taken alone or in combination. Therefore, claim 19 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

1.3 Claim 20

1.3.1 Independent Claim 20

Independent claim 20 relates to a non-transitory computer readable storage medium, but it shares the same technical features as claim 1. Accordingly, the same reasoning as in claim 1 could be applied to claim 20. Therefore, claim 20 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

2.2 Industrial Applicability

Claims 1-20 are industrially applicable under PCT Article 33(4).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 104248-5052WO	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2015/053291	International filing date (<i>day/month/year</i>) 30 September 2015 (30.09.2015)	Priority date (<i>day/month/year</i>) 30 September 2014 (30.09.2014)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant GOOGLE INC.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 14 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:



Box No. I

Basis of the report



Box No. II

Priority



Box No. III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability



Box No. IV

Lack of unity of invention



Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement



Box No. VI

Certain documents cited



Box No. VII

Certain defects in the international application



Box No. VIII

Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Date of issuance of this report 04 April 2017 (04.04.2017) Authorized officer Athina Nickitas-Etienne e-mail: pct.team4@wipo.int
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Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43*bis*.1)

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2015/053291

International filing date (day/month/year)
30.09.2015

Priority date (day/month/year)
30.09.2014

International Patent Classification (IPC) or both national classification and IPC
INV. G08B13/196 H04N7/18

Applicant
GOOGLE INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0
Fax: +49 89 2399 - 4465

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Coffa, Andrew

Telephone No. +49 89 2399-0



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2015/053291

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>2, 4-6, 9-13, 19</u>
	No: Claims	<u>1, 3, 7, 8, 14-18, 20-26</u>
Inventive step (IS)	Yes: Claims	<u>2, 4-6, 9-13</u>
	No: Claims	<u>1, 3, 7, 8, 14-26</u>
Industrial applicability (IA)	Yes: Claims	<u>1-26</u>
	No: Claims	

2. Citations and explanations

see separate sheet

item V

1. Claim 1 consists of the following technical features

(a1.1) A method for provisioning an electronic device with network credentials that enable the electronic device access to a secure wireless network, the method comprising:

(a1.2) on a client device having one or more processors and memory storing one or more programs for execution by the one or more processors:

(a1.3) logging onto a user account managed by a remote server, the server being remotely located from the client device;

(a1.4) receiving from the remote server a link approval response indicating that an electronic device is available for provisioning in association with the user account, the electronic device being remotely located from the server;

(a1.5) establishing a short range wireless link between the electronic device and the client device;

(a1.6) obtaining, at the client device, network credentials for accessing a secure wireless network, the network credentials being configured to enable the electronic device to independently access the secure wireless network;
in response to receiving the link approval response:

(a1.7) encrypting at least a portion of the network credentials using a password key provided by the remote server; and

(a1.8) sending the encrypted network credentials to the electronic device over the short range wireless link.

2. Cited documents and closest prior art.

2.1 cited documents

D1 US 8 823 795 B1 (SCALISI JOSEPH FRANK [US] ET AL) 2 September 2014 (2014-09-02)

D2 "Detailed technical specification of security for heterogeneous access",
[Online] 31 May 2002 (2002-05-31), 20020531, PAGE(S) COMPLETE,
XP007905099,
Retrieved from the Internet:
URL:<http://www.isrc.rhul.ac.uk/shaman/docs/d09v1.pdf>[retrieved on
2008-07-04]

2.2 closest prior art.

D1 is the closest prior art.

2.3 Brief description of the prior art.

2.3.1 Document D1

Describes a remote surveillance system based on a client server architecture. The client which can be a smartphone can remotely access the security system for control or data access via a wireless network/link. The use of the BLUETOOTH standard is specifically mentioned and thus the use of the security layer of the BLUETOOTH standard which specifies the encryption/decryption of the network credentials.

It is important to note that the client server architecture as disclosed by D1 (figure 1) is highly relevant for the client server architecture as described by the application, the figure 1.

2.3.2 Document D2

Describes the encryption and decryption of (network) credentials according to the Bluetooth standard is described in the Non Patent Literature (NPL) document D2 which discloses the security architecture for access to mobile wireless networks.

D2 (page 23, paragraph 2.3.2) describes the distribution of the encryption/decryption key by the "Authentication Authorization Accounting Home" (AAAH) server.

D2 (page 127, paragraph 3.3.4) describes the security layer of the BLUETOOTH standard. Specifically the partial encryption of the network credentials as specified by feature (a1.7).

3. Claim 1 and D1, feature by feature analysis

feature	feature by feature analysis of claim 1 and D1
a1.1	disclosed by D1 (figure 1, computing device(204), wireless communication(230), server(206) in combination with D1 (column 17, line 32-46, column 19, line 22-27) : <u>" <i>Joining a Wireless Network</i></u> <i>Although some security system embodiments include using electricity from electrical wires 304 of a building 300, many security system embodiments communicate with computing devices 204 via a wireless network 308 that allows security systems 202 to connect to a regional and sometimes global communications network.</i>

	<i>In some embodiments, the security system 202 communicates via a wireless network 308 with a router that enables communication with the Internet, which can enable communication via diverse means including telecommunication networks. In this way, a security system 202 can communicate with <u>computing devices 204</u> that are desktop computers, automobiles, laptop computers, tablet computers, cellular phones, mobile devices, and smart phones..."</i> <i>"..In some embodiments, the security system can pair with the computing device via Bluetooth. The <u>computing device</u> can transmit the <u>name</u> and <u>password</u> of the target network to the security system (e.g., via Bluetooth). The security system can use the name and password of the target network to join the target network..."</i> <u>Brief comment</u> (i) The feature "electronic device with network credentials" of a1.1 is disclosed by the D1("computing device"), which can be a smartphone, which transmits "name and password". (ii) D1 describes that the "pairing" of the computing device and the security system via the wireless (short range) link can be performed with the Bluetooth standard. The encryption and decryption of (network) credentials according to the Bluetooth standard is described in the Non Patent Literature (NPL) document D2 which discloses the security architecture for access to mobile wireless networks. D2(page 23, paragraph 2.3.2) describes the distribution of the encryption/decryption key by the AAAH server. D2(page 127, paragraph 3.3.4) describes the security layer of the BLUETOOTH standard. Specifically the partial encryption of the network credentials as specified by feature (a1.7).
a1.2	disclosed by D1(column 17, line 32-46, column 19, line 22-27). The smartphone in D1 implicitly discloses the "client device with one or more processors" of a1.2.
a1.3	disclosed by D1(column 17, line 32-46, column 19, line 22-27) and D1 (figure 1) which discloses that the remote server 206 wirelessly connected with the client device and the security system.
a1.4	disclosed by D1(column 16, line 24-60) : <u>" Server Interaction</u>

	Referring now to FIG. 1, ... <u>Server 206 control can prevent unwanted communication between the computing device 204 and the security system 202.</u> For example, if the computing device 204 is stolen from a user, the user can contact a server administrator to block communication between the security system 202 and the computing device 204. <u>The user can provide an authentication means, such as a password or user information, so the server administrator knows the user is in fact authorized</u> to make changes. In some embodiments, the server 206 can update any of the settings and options described herein. In some embodiments, the user can update any of the settings and options described herein via a website. <u>The server 206 can be used to register users</u> and update settings of the computing device 204, the security system 202, and/or the communication system 200. In some embodiments, <u>data captured by the security system and/or the computing device 204 (such as videos, pictures, and audio) is stored by another remote device such as the server 206.</u> Cloud storage, enterprise storage, and/or networked enterprise storage can be used to store video, pictures, and/or audio from the communication system 200 or from any part of the communication system 200. <u>The user can download and/or stream stored data and/or storage video, pictures, and/or audio.</u> ... <u>Brief comment</u> (i) The "user account" of a1.4 is disclosed by the server who registers users : <u>The server 206 can be used to register users</u> (ii) The server performs the "authentication" of the user : <u>The user can provide an authentication means, such as a password or user information, so the server administrator knows the user is in fact authorized</u>
a1.5	the "short range wireless link" of a1.5 is disclosed by the BLUETOOTH link, D1(column 19, line 22-27) : "..In some embodiments, the security system can pair with the computing device via Bluetooth. The <u>computing device</u> can transmit the <u>name</u> and <u>password</u> of the target network to the security system (e.g., via Bluetooth). The security system can use the name and password of the target network to join the target network..."
a1.6	implicitly disclosed by D1(column 19, line 22-27) : "..In some embodiments, the security system can pair with the computing device via Bluetooth. The <u>computing device</u> can transmit the <u>name</u> and <u>password</u> of the target network to the security system (e.g., via Bluetooth). The security system can use the name and password of the target network to join the target network..." <u>Brief comment</u>

	(i) The "client device" of a1.6 is disclosed by the "computing device" of D1 which can be for example a smartphone. (ii) The partial encryption of the network credentials is defined by the "Baseband Specification v.1.1.2001" of the BLUETOOTH standard as described by the NPL document D2(page 127, paragraph 3.3.4). This discloses feature a1.7 (iii) The provision of the encryption key by the AAAH server and the sharing of the security key between the client device and the server is also disclosed by D2(page 23, paragraph 2.3.2) which discloses the security layer specification within a client server architecture which uses wireless mobile communication links. This discloses feature a1.8. D2(page 23, paragraph 2.3.2) describes the encryption key generation and sharing process: <i>"...(1) a secret key would have to be distributed to DHCP-server and -client and</i> <i>(2) client and server would have to agree on a secret ID to identify the key used.</i> <i>The distribution of a secret key to the client and server could be arranged in the course of the initial authentication procedure where the <u>key could be generated and distributed by the AAAH-server.</u> "</i> D2(page 127, paragraph 3.3.4) describes the partial encryption of the network credentials (the term network credentials is broadly interpretable, this can be the "user information"): <i>" 3.3.4 <u>BLUETOOTH</u></i> <i>The Bluetooth wireless link layer communication system [88] provides an authentication mechanism for peer device authentication. At the authentication mechanism, a key for an encryption mechanism is derived. The Bluetooth encryption mechanism is applied to the payload of Baseband packets. Signalling and <u>user information</u> is transmitted in the packet payload, which <u>can be encrypted</u>, while the <u>access code</u> and the packet header are <u>never encrypted</u>....</i> <i>[88] Bluetooth SIG, Specification of the Bluetooth System, Volume 1, Part [Beta] - Baseband Specification, [nu] 1.1, 2001"</i>
a1.7	implicitly disclosed by D1(column 19, line 22-27), see the substantive examination analysis comments for (a1.6) above.
a1.8	implicitly disclosed by D1(column 19, line 22-27), see the substantive examination analysis comments for (a1.6) above.

Conclusion : claim 1 is not new (Art. 33(2) PCT).

4. Claims 1-26, substantive examination analysis overview table.

claim	substantive examination analysis, novelty and inventive step (Art. 33(2), 33(3) PCT).
1	not new, see the detailed feature by feature analysis of claim 1 in section 3 above.
2	the additional features of claim 2 which specifies the encryption key generation of claim 1 is neither disclosed nor suggested by D1 or D2.
3	not new, that the "short range wireless link" can be a BLUETOOTH link is disclosed by D1(column 19, line 22-27) : <i>"..In some embodiments, the security system can pair with the computing device via Bluetooth. The <u>computing device</u> can transmit the <u>name</u> and <u>password</u> of the target network to the security system (e.g., via Bluetooth). The security system can use the name and password of the target network to join the target network..."</i>
4	the additional features of claim 4 which specifies the user login process are neither disclosed nor suggested by D1 or D2.
5	the additional technical features of claim 5 which specifies the use of the "advertising packets" are neither disclosed nor suggested by D1 or D2.
6	the additional technical features of claim 6 which specifies the use of the "advertising packets" are neither disclosed nor suggested by D1 or D2.
7	not new, the user registration or the mobile computing device registration at the server is disclosed by D1(column 16, line 24-60) : <i>" <u>Server Interaction</u> ...The user can provide an authentication means, such as a password or user information, so the server administrator knows the user is in fact authorized The server 206 can be used to register users ...</i>
8	not new, that the remotely controlled security system can have a camera is disclosed by D1(figure 1, camera assembly (208)).

9	the additional features of claim 9 which specifies the user authentication process are neither disclosed nor suggested by D1 or D2.
10	claim 10 is dependent on claim 9, the additional features of claim 10 which specifies the network credential encryption process are neither disclosed nor suggested by D1 or D2.
11	claim 11 is dependent on claim 10, the additional features of claim 11 which specifies the time dependent network credential encryption process are neither disclosed nor suggested by D1 or D2.
12	claim 12 is dependent on claim 9, the additional features of claim 12 which specifies the user authentication process based on the use of a random number and a second authentication token are neither disclosed nor suggested by D1 or D2.
13	claim 13 is dependent on claim 9, the additional features of claim 13 which specifies the security layer data transmitted via the short range wireless link are neither disclosed nor suggested by D1 or D2.
14	not new, the additional features of claim 14 specifies the determination of the available secure networks. D1 (figure 1, mobile computing device (202) in combination with column 17, line 32-46) describes that the mobile computing device (202) can be a smartphone. A smartphone has the means to show a list of secure and non secure or open wireless network the smartphone can connect to. Therefore D1 (figure 1, mobile computing device (202) in combination with column 17, line 32-46) implicitly discloses that claim 14 is not new. In addition it must be noted that available wireless network information can be shared between the security system and the smartphone as described by D1 (column 17, line 47-51): <i>"..In some embodiments, a security system (e.g., a doorbell) needs to know <u>which wireless network to join</u> and needs to know the wireless network's password. A computing device, such as a smartphone, can provide this information to the security system..."</i>
15	not new, claim 15 depends on claim 14 and the additional features of claim 15 further specify a wireless network selection means on the basis of a user interface, this is also implicitly disclosed by the smartphone described in D1 (column 17, line 52-62) :

	" The following method is used in some embodiments. (Some embodiments include orders that are different from the following order.) First, the computing device (e.g., a smartphone) creates an ad hoc network. Second, the user opens software (such as an app) on the computing device. When the security system is in Setup Mode, the security system can automatically join the computing device's ad hoc network. Third, <u>the user can utilize the software to select the wireless network that the security system should join and to provide the password of the wireless network (e.g., of the router) to the security system.</u>"
16	not new, claim 16 is dependent on claim 1 and further specifies the authentication of a password by the server, this is disclosed by D1(column 16, line 24-60) : <u>" Server Interaction</u> <u>...The user can provide an authentication means, such as a password or user information, so the server administrator knows the user is in fact authorized The server 206 can be used to register users ...</u>
17	not new, the use of WLAN is disclosed by D1(column 10, line 37-42) : <u>"..The wireless communication 230 can include the following communication means: radio, WiFi (e.g., wireless local area network), cellular, Internet, Bluetooth, telecommunication, electromagnetic, infrared, light, sonic, and microwave. Other communication means are used by some embodiments. In some embodiments, such as embodiments that include telecommunication or cellular communication means, the security system 202 can initiate voice calls or send text messages to a computing device 204..."</u>
18	not new, the use of a SSID and network password for the WIFI network is implicitly disclosed by D1(column 18, line 29-34) : <u>" In some cases, the computing device recognizes the name of the network of the security system, automatically joins the network of the security system, and transmits the name and password of the target network to the security system. In some cases, these steps are preceded by launching software (on the computing device) configured to perform these steps and/or capable of performing these steps."</u>
19	new but not inventive, D1(column 16, line 17-24) : <u>"...Data sent between a security system and a computing device can be secured via encryption, transport layer security, secure sockets layer, and/or cryptographic protocols. Data regarding a security system that is sent from one computing device to another computing device can be secured via encryption, transport layer security, secure sockets layer, and/or cryptographic protocols..."</u> guides the man skilled in the art to use a data encryption algorithm to secure a wireless data link.

	D2(pages 6-10) provides the man skilled in the art several data encryption standards he can choose from, for example : - Advanced Encryption Standard (AES), - Extensible Authentication Protocol (EAP), - Wired Equivalent Privacy (WEP).
20	not new, that data communication is not necessarily performed via a secure link is disclosed by : D1(column 16, line 17-24) : <i>" ...Data sent between a security system and a computing device can be secured via encryption, transport layer security, secure sockets layer, and/or cryptographic protocols. Data regarding a security system that is sent from one computing device to another computing device <u>can be secured via encryption, transport layer security, secure sockets layer, and/or cryptographic protocols...</u>"</i>
21	not new, the security system can set up an own wireless network or hot spot, which is separate from the secure network, as disclosed by D1 (column 18, line 15-28) : <i>" In some embodiments, a <u>security system creates its own wireless network (e.g., WiFi network)</u> with a recognizable network name (e.g., a service set identifier). Software can provide setup instructions to the user via a computing device, in some cases, upon detecting a new wireless network with the recognizable network name. The instructions can inform the user how to temporarily join the security system's wireless network with the computing device. The user can select and/or transmit the name and password of a target wireless network to the security system from the computing device. The security system can join the target wireless network (e.g., the wireless network of the building to which the security system is attached) and can terminate its own wireless network"</i> <u>Brief comment</u> The ability to create a (mobile) hot spot by a smartphone is implicitly available.
22	not new, the use of an application or app on the smartphone which provides a user interface to connect with (secure) networks is disclosed by D1(column 17, line 52-62) : <i>" The following method is used in some embodiments. (Some embodiments include orders that are different from the following order.) First, the computing device (e.g., a smartphone) creates an ad hoc network. Second, the user opens software (such as an app) on the computing device. When the security system is in Setup</i>

	<i>Mode, the security system can automatically join the computing device's ad hoc network. Third, <u>the user can utilize the software to select the wireless network that the security system should join and to provide the password of the wireless network (e.g., of the router) to the security system.</u></i>
23	not new, claim 23 is the corresponding system claim of method claim 1.
24	not new, claim 24 is the corresponding computer readable medium containing the instructions to execute the method of claim 1.
25	not new, claim 25 is the corresponding computer system claim of method claim 1.
26	not new, claim 26 is the computer readable medium on which the computer instructions to perform the method of claim 1 are stored.

Electronic Patent Application Fee Transmittal					
Application Number:		16708189			
Filing Date:		09-Dec-2019			
Title of Invention:		Apparatus and Method for Seamless Commissioning of Wireless Devices			
First Named Inventor/Applicant Name:		Jeffrey P. Mathews			
Filer:		Douglas James Crisman/Lamesha Robertson			
Attorney Docket Number:		104248-5365-US			
Filed as Large Entity					
Filing Fees for Utility under 35 USC 111(a)					
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:					
Pages:					
Claims:					
Miscellaneous-Filing:					
Petition:					
Patent-Appeals-and-Interference:					
Post-Allowance-and-Post-Issuance:					
Extension-of-Time:					

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	1806	1	240	240
Total in USD (\$)				240

Electronic Acknowledgement Receipt	
EFS ID:	40380447
Application Number:	16708189
International Application Number:	
Confirmation Number:	7138
Title of Invention:	Apparatus and Method for Seamless Commissioning of Wireless Devices
First Named Inventor/Applicant Name:	Jeffrey P. Mathews
Customer Number:	82750
Filer:	Douglas James Crisman/Lamesha Robertson
Filer Authorized By:	Douglas James Crisman
Attorney Docket Number:	104248-5365-US
Receipt Date:	25-AUG-2020
Filing Date:	09-DEC-2019
Time Stamp:	17:59:17
Application Type:	Utility under 35 USC 111(a)

Payment information:	
Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 240
RAM confirmation Number	E202080H59495027
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		1_104248_5365US_IDS.pdf	231362	yes	5
			d777ccf2d823dd788e4bb676d7f2c0a723de08ae		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Information Disclosure Statement (IDS) Form (SB08)		5	5	
	Transmittal Letter		1	4	
Warnings:					
Information:					
2	Non Patent Literature	Google_IPRP_2015_060405_16_MAY_2017.pdf	261378	no	7
			5965b151062bc83c0747917b86ae90c4f446b0cd		
Warnings:					
Information:					
3	Non Patent Literature	Google_IPRP_PCT_2015_05329_1_04_APR_2017.pdf	669081	no	14
			0ebdd42ddb7650639c970da023c5991e4a7dbc25		
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30936	no	2
			71375dc97ce77a83843196d6fcaca321fc4e5691		
Warnings:					
Information:					
Total Files Size (in bytes):			1192757		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed		PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce	
Electronic Petition Request	TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT		
Application Number	16708189		
Filing Date	09-Dec-2019		
First Named Inventor	Jeffrey Mathews		
Attorney Docket Number	104248-5365-US		
Title of Invention	Apparatus and Method for Seamless Commissioning of Wireless Devices		
☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action ☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.			
Owner		Percent Interest	
GOOGLE LLC		100%	
The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s) 9198204 9485790 as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns. In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later: - expires for failure to pay a maintenance fee; - is held unenforceable; - is found invalid by a court of competent jurisdiction; - is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321; - has all claims canceled by a reexamination certificate; - is reissued; or - is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.			

☒ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

☐ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicant claims the following fee status:

☐ Small Entity

☐ Micro Entity

☒ Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

☒ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Registration Number 39951

☐ A sole inventor

☐ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application

☐ A joint inventor; all of whom are signing this request

Signature	/Douglas J. Crisman/
Name	Douglas J. Crisman

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal				
Application Number:		16708189		
Filing Date:		09-Dec-2019		
Title of Invention:		Apparatus and Method for Seamless Commissioning of Wireless Devices		
First Named Inventor/Applicant Name:		Jeffrey P. Mathews		
Filer:		Douglas James Crisman/Linda Quintana		
Attorney Docket Number:		104248-5365-US		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	1814	1	170	170
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				170

Doc Code: DISQ.E.FILE

Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 16708189

Filing Date: 09-Dec-2019

Applicant/Patent under Reexamination: Mathews

Electronic Terminal Disclaimer filed on October 29, 2020

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt	
EFS ID:	40970144
Application Number:	16708189
International Application Number:	
Confirmation Number:	7138
Title of Invention:	Apparatus and Method for Seamless Commissioning of Wireless Devices
First Named Inventor/Applicant Name:	Jeffrey P. Mathews
Customer Number:	82750
Filer:	Douglas James Crisman/Linda Quintana
Filer Authorized By:	Douglas James Crisman
Attorney Docket Number:	104248-5365-US
Receipt Date:	29-OCT-2020
Filing Date:	09-DEC-2019
Time Stamp:	17:27:42
Application Type:	Utility under 35 USC 111(a)

Payment information:	
Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 170
RAM confirmation Number	E20200SH27388009
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	33532	no	2
			abe5015aaf393b13baf523261a815fc0ff057b5d		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30765	no	2
			3c8ddcc02956b39c106f9ccc5cb7e3732b86f622		
Warnings:					
Information:					
Total Files Size (in bytes):			64297		
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Jeffrey P. Mathews et al.	Confirmation No.:	7138
Serial No.:	16/708,189	Art Unit:	2464
Filed:	December 9, 2019	Examiner:	Masur, Paul H.
For:	<i>Apparatus and Method for Seamless Commissioning of Wireless Devices</i>	Atty. Docket No.:	104248-5365-US

RESPONSE TO OFFICE ACTION

SUBMITTED WITH TERMINAL DISCLAIMER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The enclosed Amendment is in response to the Office Action dated August 20, 2020 for the above identified patent application.

This response is filed with an electronic terminal disclaimer.

The Commissioner is hereby authorized to charge any required fee(s) to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104248-5365-US).

Electronic Acknowledgement Receipt	
EFS ID:	40976241
Application Number:	16708189
International Application Number:	
Confirmation Number:	7138
Title of Invention:	Apparatus and Method for Seamless Commissioning of Wireless Devices
First Named Inventor/Applicant Name:	Jeffrey P. Mathews
Customer Number:	82750
Filer:	Douglas James Crisman/Linda Quintana
Filer Authorized By:	Douglas James Crisman
Attorney Docket Number:	104248-5365-US
Receipt Date:	29-OCT-2020
Filing Date:	09-DEC-2019
Time Stamp:	17:30:44
Application Type:	Utility under 35 USC 111(a)

Payment information:					
Submitted with Payment			no		
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		104248-5365-US_Response_29-OCT-2020.pdf	140059	yes	8
			572135a6edca8e1d2f572c429dae5d8f00f8191f		

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Applicant Arguments/Remarks Made in an Amendment	6	8
	Claims	2	5
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Warnings:			
Information:			
Total Files Size (in bytes):		140059	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.			

REMARKS

This amendment responds to the office action mailed August 20, 2020. In the office action the Examiner:

- rejected claims 2-11 on the ground of nonstatutory double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 9,485,790;
- rejected claim 2 on the ground of nonstatutory double patenting as being unpatentable over claims 1 of U.S. Patent No. 9,198,204;
- rejected claims 12, 13, and 16 on the ground of nonstatutory double patenting as being unpatentable over claims 9 and 11 of U.S. Patent No. 9,485,790;
- rejected claims 12 and 13-15 on the ground of nonstatutory double patenting as being unpatentable over claims 8, 11, 12, and 14 of U.S. Patent No. 9,198,204;
- rejected claims 17, 18, and 19 on the ground of nonstatutory double patenting as being unpatentable over claims 15, 18, 20, and 21 of U.S. Patent No. 9,198,204;
- rejected claims 17, 20, and 21 on the ground of nonstatutory double patenting as being unpatentable over claims 16 and 20 of U.S. Patent No. 9,485,790; and
- commented on the Art of Record.

MCKESSON STATEMENT

In view of *McKesson Information Solutions v. Bridge Medical* (Fed. Cir. 2007), Applicant wishes to inform the Examiner that the prosecution history of the following US Patent Applications may contain information relevant to the pending application:

(1) U.S. Utility Patent Application No. 15/960,337, filed April 23, 2018, now U.S. Patent No. 10,505,797;

(2) U.S. Utility Patent Application No. 15/452,654, filed March 7, 2017, now U.S. Patent No. 9,998,325;

(3) U.S. Utility Patent Application No. 15/159,735, filed May 19, 2016, now U.S. Patent No. 9,591,690;

(4) U.S. Utility Patent Application No. 14/927,406, filed October 29, 2015, now U.S. Patent No. 9,485,790; and

(5) U.S. Utility Patent Application No. 13/839,828, filed March 15, 2013, now U.S. Patent No. 9,198,204.

The Examiner is encouraged to review the art made of record, office actions and the notices of allowance, if any, in the above-mentioned applications, all of which are available on PAIR.

AMENDMENTS TO THE CLAIMS

There is no amendment to the pending claims. The pending claims are: claims 2-21.

REMARKS CONCERNING DOUBLE PATENTING REJECTIONS

I. REJECTION OF CLAIMS 2-11 ON THE GROUND OF NONSTATUTORY DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 1-8 OF U.S. PATENT NO. 9,485,790

Without acquiescing to the merits of the rejections, and in order to advance prosecution, Applicant submits herewith a terminal disclaimer with respect to U.S. Patent Nos. 9,485,790 and 9,198,204 to which Applicant has legal title. The filing of this terminal disclaimer is thought to obviate the non-statutory double patenting rejection.

II. REJECTION OF CLAIM 2 ON THE GROUND OF NONSTATUTORY DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 1 OF U.S. PATENT NO. 9,198,204

The filing of the above terminal disclaimer addresses the non-statutory double patenting rejection.

III. REJECTION OF CLAIMS 12, 13, AND 16 ON THE GROUND OF NONSTATUTORY DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 9 AND 11 OF U.S. PATENT NO. 9,485,790

The filing of the above terminal disclaimer addresses the non-statutory double patenting rejection.

IV. REJECTION OF CLAIMS 12 AND 13-15 ON THE GROUND OF NONSTATUTORY DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 8, 11, 12, AND 14 OF U.S. PATENT NO. 9,198,204

The filing of the above terminal disclaimer addresses the non-statutory double patenting rejection.

V. REJECTION OF CLAIMS 17, 18, AND 19 ON THE GROUND OF NONSTATUTORY DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 15, 18, 20, AND 21 OF U.S. PATENT NO. 9,198,204

The filing of the above terminal disclaimer addresses the non-statutory double patenting rejection.

VI. REJECTION OF CLAIMS 17, 20, AND 21 ON THE GROUND OF NONSTATUTORY DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 16 AND 20 OF U.S. PATENT NO. 9,485,790

The filing of the above terminal disclaimer addresses the non-statutory double patenting rejection.

CONCLUSION

By responding in the foregoing remarks only to particular positions asserted by the Examiner, the Applicant does not necessarily acquiesce in other positions that have not been explicitly addressed. In addition, the Applicant's arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist.

In light of the above amendments and remarks, the Applicant respectfully requests that the Examiner reconsider this application with a view towards allowance. The Examiner is invited to call the undersigned attorney at (650) 843-4000, if a telephone call could help resolve any remaining items.

Respectfully submitted,

Date: October 29, 2020

/Douglas J. Crisman/

39,951

Douglas J. Crisman

(Reg. No.)

MORGAN, LEWIS & BOCKIUS LLP

1400 Page Mill Road

Palo Alto, CA 94304

(650) 843-4000

IN THE CLAIMS:

Rewrite the pending claims and add new claims as follows:

1. (Canceled)
2. (Previously Presented) A method for commissioning a target device onto a communication network, comprising:
 - at the target device including a microprocessor, a wireless radio, and commissioning logic:
 - receiving a request to initiate a commissioning process with the target device;
 - establishing a short-range signal transmission path with a wireless device independently of the communication network;
 - in response to receiving the request, receiving one or more network configuration packets from the wireless device via the short-range signal transmission path, wherein the one or more network configuration packets convey network configuration data associated with the communication network according to a predetermined data format, the network configuration data including at least a security passphrase for accessing the communication network;
 - executing an application on the target device to decode and process the one or more network configuration packets and recover the network configuration data; and
 - after receiving the network configuration packets, employing via the wireless radio the network configuration data conveyed in the one or more network configuration packets to enable the target device to join the communication network.
3. (Previously Presented) The method of claim 2, wherein the wireless device is selected from a group consisting of a smartphone and a tablet computer.
4. (Previously Presented) The method of claim 2, wherein information received via the short-range signal transmission path is received at a first wireless radio of the target device, and the first wireless radio employs at least one of a plurality of radio modulation techniques including frequency shift keying (FSK), phase shift keying (PSK), on-off keying (OOK), and quadrature amplitude modulation (QAM).
5. (Previously Presented) The method of claim 2, wherein the short-range signal transmission path is associated with a communication channel based on a proprietary RF communication standard.

6. (Previously Presented) The method of claim 2, wherein the short-range signal transmission path is associated with a communication channel based on one of Bluetooth communication, radio frequency identification (RFID), Zigbee, radio frequency for consumer electronics (RF4CE), Z-Wave, and near field communication.
7. (Previously Presented) The method of claim 2, further comprising:
contacting the wireless device via the communication network to indicate that the target device has successfully entered the communication network.
8. (Previously Presented) The method of claim 7, further comprising:
after contacting the wireless device, continuing the commission process, including receiving, via the communication network, device configuration data from the wireless device.
9. (Previously Presented) The method of claim 8, wherein the device configuration data including at least one of an Internet Protocol address, proxy, and gateway configuration.
10. (Previously Presented) The method of claim 2, further comprising:
generating one of a visual indication and an audio indication to a user about a status of the commissioning process.
11. (Previously Presented) The method of claim 2, further comprising an application that includes a sequence of program instructions directed towards commissioning the target device onto the communication network.
12. (Previously Presented) A target device, comprising:
a microprocessor;
a wireless radio;
a commissioning logic; and
a memory storing programs for execution by the target device, the programs further including instructions for:
receiving a request to initiate a commissioning process with the target device;
establishing a short-range signal transmission path with a wireless device independently of a communication network;
in response to receiving the request, receiving one or more network configuration packets from the wireless device via the short-range signal transmission path,

wherein the one or more network configuration packets convey network configuration data associated with the communication network according to a predetermined data format, the network configuration data including at least a security passphrase for accessing the communication network;

executing an application on the target device to decode and process the one or more network configuration packets and recover the network configuration data; and

after receiving the network configuration packets, employing via the wireless radio the network configuration data conveyed in the one or more network configuration packets to enable the target device to join the communication network.

13. (Previously Presented) The target device of claim 12, further comprising an application that includes a sequence of program instructions directed towards commissioning the target device onto the communication network.

14. (Previously Presented) The target device of claim 12, wherein the short-range signal transmission path includes an audio signal transmission path, and audio signals are modulated to transmit the one or more network configuration packets over the audio signal transmission path to an audio sensor of the target device.

15. (Previously Presented) The target device of claim 12, wherein the short-range signal transmission path includes a visual signal transmission path, and visual signals are modulated to transmit the one or more network configuration packets over the visual signal transmission path to an optical sensor of the target device.

16. (Previously Presented) The target device of claim 12, wherein the communication network includes a wireless local area network (WLAN).

17. (Previously Presented) A non-transitory computer readable storage medium storing one or more programs configured for execution by a target device for commissioning the target device onto a communication network, the target device including a microprocessor, a wireless radio, and commissioning logic, the one or more programs comprising instructions for:

receiving a request to initiate a commissioning process with the target device;
establishing a short-range signal transmission path with a wireless device
independently of the communication network;

in response to receiving the request, receiving one or more network configuration packets from the wireless device via the short-range signal transmission path, wherein the one or more network configuration packets convey network configuration data associated with the communication network according to a predetermined data format, the network configuration data including at least a security passphrase for accessing the communication network;

executing an application on the target device to decode and process the one or more network configuration packets and recover the network configuration data; and

after receiving the network configuration packets, employing via the wireless radio the network configuration data conveyed in the one or more network configuration packets to enable the target device to join the communication network.

18. (Previously Presented) The non-transitory computer readable storage medium of claim 17, wherein the one or more programs further comprise instructions for:

generating one of a visual indication and an audio indication to a user about a status of the commissioning process.

19. (Previously Presented) The non-transitory computer readable storage medium of claim 17, further comprising an application that includes a sequence of program instructions directed towards commissioning the target device onto the communication network.

20. (Previously Presented) The non-transitory computer readable storage medium of claim 17, wherein the one or more programs further comprise instructions for:

contacting the wireless device via the communication network to indicate that the target device has successfully entered the communication network.

21. (Previously Presented) The non-transitory computer readable storage medium of claim 20, wherein the one or more programs further comprise instructions for:

after contacting the wireless device, continuing the commission process, including receiving, via the communication network, device configuration data from the wireless device.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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NOTICE OF ALLOWANCE AND FEE(S) DUE

82750 7590 11/16/2020
Morgan, Lewis & Bockius LLP (PA)(Google)
1400 Page Mill Road
Palo Alto, CA 94304-1124

EXAMINER

MASUR, PAUL H

ART UNIT

PAPER NUMBER

2464

DATE MAILED: 11/16/2020

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/708,189	12/09/2019	Jeffrey P. Mathews	104248-5365-US	7138

TITLE OF INVENTION: Apparatus and Method for Seamless Commissioning of Wireless Devices

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	02/16/2021

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

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Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

82750 7590 11/16/2020
Morgan, Lewis & Bockius LLP (PA)(Google)
1400 Page Mill Road
Palo Alto, CA 94304-1124

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

_____ (Typed or printed name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/708,189	12/09/2019	Jeffrey P. Mathews	104248-5365-US	7138

TITLE OF INVENTION: Apparatus and Method for Seamless Commissioning of Wireless Devices

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	02/16/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
MASUR, PAUL H	2464	709-222000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/708,189	12/09/2019	Jeffrey P. Mathews	104248-5365-US	7138
82750	7590	11/16/2020	EXAMINER	
Morgan, Lewis & Bockius LLP (PA)(Google)			MASUR, PAUL H	
1400 Page Mill Road			ART UNIT	
Palo Alto, CA 94304-1124			PAPER NUMBER	
			2464	
DATE MAILED: 11/16/2020				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 16/708,189	Applicant(s) Mathews et al.	
	Examiner PAUL H MASUR	Art Unit 2464	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/29/2020.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 2-21. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some *c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892) 2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>8/25/2020</u> . 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____. 4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	5. ☐ Examiner's Amendment/Comment 6. ☒ Examiner's Statement of Reasons for Allowance 7. ☐ Other _____.
---	--

/PAUL H MASUR/
Primary Examiner, Art Unit 2464

REASONS FOR ALLOWANCE

1. **Claims 2-21 are pending.**

Notice of Pre-AIA or AIA Status

2. **The present application is being examined under the pre-AIA first to invent provisions.**

Information Disclosure Statement

3. **The information disclosure statement (IDS) submitted on 8/25/2020 was filed after the mailing date of the Non-Final Rejection on 8/20/2020.** The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Terminal Disclaimer

4. **The terminal disclaimer filed on 10/29/2020 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent Nos. 9,198,204 and 9,485,790 has been reviewed and is accepted.** The terminal disclaimer has been recorded.

Allowable Subject Matter

5. **Claims 2-21 are allowed.**
6. **The following is an examiner's statement of reasons for allowance:**

Please see the Non-Final Rejection (mailed 8/20/2020), pgs. 6 and 7, numeral 11, for a further discussion on the closest prior art.

Conclusion

7. **Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee.** Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. **Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL H. MASUR whose telephone number is (571)270-7297.** The examiner can normally be reached on Monday to Friday, 6 AM to 3 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Date: 11/5/2020
/PAUL H MASUR/
Primary Examiner, Art Unit 2464

Issue Classification 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

CPC						
Symbol					Type	Version
H04L	/	41	/	0806	F	2013-01-01
H04W	/	4	/	70	I	2018-02-01
H04W	/	76	/	10	I	2018-02-01
H04W	/	4	/	80	I	2018-02-01
H04W	/	84	/	18	I	2013-01-01
H04B	/	10	/	116	I	2013-01-01
H04W	/	84	/	12	A	2013-01-01

CPC Combination Sets				
Symbol		Type	Set	Ranking
	/			

NONE	Total Claims Allowed:	
(Assistant Examiner)	(Date)	20
/PAUL H MASUR/ Primary Examiner, Art Unit 2464	05 November 2020	O.G. Print Claim(s)
(Primary Examiner)	(Date)	1

Issue Classification 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

INTERNATIONAL CLASSIFICATION			
CLAIMED			
H04L	/	12	/ 24
H04W	/	76	/ 10
H04W	/	4	/ 80
NON-CLAIMED			
	/		/

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/PAUL H MASUR/ Primary Examiner, Art Unit 2464 (Primary Examiner)	05 November 2020 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 5

Issue Classification 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	9	10	18	19										
1	2	10	11	19	20										
2	3	11	12	20	21										
3	4	12	13												
4	5	13	14												
5	6	14	15												
6	7	15	16												
7	8	16	17												
8	9	17	18												

NONE	Total Claims Allowed:	
(Assistant Examiner)	(Date)	20
/PAUL H MASUR/ Primary Examiner, Art Unit 2464 (Primary Examiner)	05 November 2020 (Date)	O.G. Print Claim(s) 1 O.G. Print Figure 5

<i>Index of Claims</i> 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	08/17/2020	11/05/2020							
	1	-	-							
1	2	✓	=							
2	3	✓	=							
3	4	✓	=							
4	5	✓	=							
5	6	✓	=							
6	7	✓	=							
7	8	✓	=							
8	9	✓	=							
9	10	✓	=							
10	11	✓	=							
11	12	✓	=							
12	13	✓	=							
13	14	✓	=							
14	15	✓	=							
15	16	✓	=							
16	17	✓	=							
17	18	✓	=							
18	19	✓	=							
19	20	✓	=							
20	21	✓	=							

<i>Search Notes</i> 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

CPC - Searched*		
Symbol	Date	Examiner
H04W84/18	08/14/2020	/P.H.M/
H04W4/005,008	08/14/2020	/P.H.M/
H04W84/12	08/14/2020	/P.H.M/
H04L41/0803,0806	08/14/2020	/P.H.M/
H04B10/116	08/14/2020	/P.H.M/
H04W84/12,18	08/14/2020	/P.H.M/
H04W4/70	08/14/2020	/P.H.M/
H04W4/80	08/14/2020	/P.H.M/
H04W76/10	08/14/2020	/P.H.M/
ABOVE - UPDATED	11/05/2020	/P.H.M/

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/P.H.M/ Primary Examiner, Art Unit 2464	
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<i>Search Notes</i> 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

Search Notes		
Search Notes	Date	Examiner
Considered file wrapper history of patent family	08/14/2020	/P.H.M/
Inventor name search	08/14/2020	/P.H.M/
Considered IDS documents	08/14/2020	/P.H.M/
Text and and classification search	08/14/2020	/P.H.M/
CPC subgroups - limited by text	08/14/2020	/P.H.M/
Databases Used: uspat, us-pgpub, fprs, epo, jpo, derwent, ibm_tdb	08/14/2020	/P.H.M/
Ip.com (NPL & Patent search) - see attached	08/17/2020	/P.H.M/
Considered applicant's submitted amendment	11/05/2020	/P.H.M/
Updated inventor name search	11/05/2020	/P.H.M/
Updated text and classification search	11/05/2020	/P.H.M/
NPL Search (Google Patents) - see attached	11/05/2020	/P.H.M/
Interference search - see attached	11/05/2020	/P.H.M/

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
H04L	41/ALL	11/05/2020	/P.H.M/

/P.H.M/ Primary Examiner, Art Unit 2464	
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Patents

(wlan) (target) (commissioning) (transmission path) (transducer) before:p

About 4,834 results

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Sort by: Relevance Group by: None Deduplicate by: Family Results / page: 10

NeXt generation/dynamic spectrum access/cognitive radio wireless networks: A survey

Google Scholar · david.choffnes.com · Akyildiz I · Computer networks

Published 2006

... Volume 50, Issue 13, 15 September 2006, Pages 2127-2159. Computer Networks. NeXt generation/dynamic spectrum access/cognitive radio wireless networks: A survey ... Abstract. Today's wireless networks are characterized by a fixed spectrum assignment policy ...

A survey of spectrum sensing algorithms for cognitive radio applications

Google Scholar · arifidilut.ac.ir · Yucek T · IEEE communications surveys & tutorials

Published 2009

... The idle periods between bursty transmissions of wireless local area network (WLAN) signals are, for example ... An example to such systems is IEEE 802.11a/g based WLAN ... can be decreased by sensing only changing parts of the spectrum instead of the entire target spectrum ...

Energy conservation in wireless sensor networks: A survey

Google Scholar · cnd.itlars.it · Anastasi G · Ad hoc networks

Published 2009

... in the following subsections we only review the main proposals for topology control in wireless sensor networks according to the above classification ... When a source node (initiator) has to communicate with a neighboring node (target), it sends a stream of periodic beacons on ...

A survey on wireless multimedia sensor networks

Google Scholar · bwn.ece.gatech.edu · Akyildiz I · Computer networks

Published 2007

... networks will be composed of interconnected, battery-powered miniature video cameras, each packaged with a low-power wireless transceiver that is ... Overlapped cameras can provide different views of the same area or target, while the joint operation of cameras and audio or ...

Body area networks: A survey

Google Scholar · www.academis.edu · Chen M · Mobile networks and applications

Published 2011

... Compared with existing technologies such as WLANs, BANs enable wireless communications in or around a human body by means sophisticated ... Most of these applications use WLAN to communicate to the AP because it is much faster than cellular networks ... Wireless standard ...

A survey on wireless body area networks

Google Scholar · biblio.ugent.be · Laveé B · Wireless networks

Published 2011

... A WPAN uses IEEE 802.15.1 (Bluetooth) or IEEE 802.15.4 (ZigBee), a WLAN uses IEEE 802.11 (WiFi) and a ... In several papers, Wireless Body Area Networks are considered as a special type of a Wireless Sensor Network or a Wireless Sensor and Actuator Network (WSAN) ...

Systems, methods, and devices for commissioning wireless sensors

US · US10332720B2 · Clarke W. McAllister · Adasa Inc.

Priority 2005-08-19 · Filed 2017-09-18 · Granted 2020-02-04 · Published 2020-02-04

175 A is preferably a Wi-Fi or Bluetooth connection. A wireless node of a Bluetooth personal area network is used according one embodiment of the ... , proximity or contact of sensor suite with the targeted transport container causes a second type of Trigger Event, resulting in the commissioning and ...

Antennas and propagation for body-centric wireless communications

Google Scholar · www.researchgate.net · Hail P

Published 2012

... Received Signal Voltage of the Receiver Investigation of the Dominant Signal Transmission Path 29 29 ... 6.9 Wearable Antennas Near the Human Body: An Example of a WLAN Antenna 6.9 ... Miniaturization is an important element in allowing the integration of wireless data-paths ...

Systems, methods, and devices for commissioning wireless sensors

US · US8228133B2 · Clarke McAllister · Adasa Inc.

Priority 2005-08-19 · Filed 2010-06-21 · Granted 2012-07-24 · Published 2012-07-24

175 A is preferably a Wi-Fi or Bluetooth connection. A wireless node of a Bluetooth personal area network is used according one embodiment of the ... across the target surface is an optical sensor. 15. The device of claim 11 wherein the target surface is moving. 16. A plurality of commissioned RFID ...

Systems and methods to deliver digital location-based content to a visitor at a ...

US · US8447331B2 · James David Busch · Enhanced Geographic Lic

Priority 2007-04-08 · Filed 2012-07-23 · Granted 2013-05-21 · Published 2013-05-21

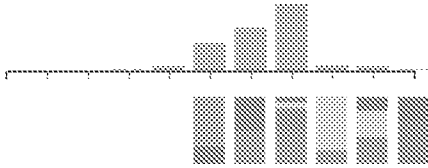


... a multi-story building the user of the mobile device 140 was located in. The altitude data may be obtained from a pressure sensor, GPS receiver 144, ... The bar may pay Albert a commission only for girls that he invites that are within a certain age range or demographic group that the bar is targeting ...

Next > >>

About 4,834 results

Top 1000 results by filing date



Relative count of top 5 values

Assignees	Inventors	CPCs
Digital Lumens Incorporated		1.7%
Rearden, Llc		1%
RedSky Technologies, Inc.		0.8%
Ofph, Llc		0.8%
Silverbrook Research Pty Ltd		0.8%
Expand		

EAST Search History

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S605	12,640	(wlan (wireless near2 lan) (wireless near2 local near2 area near2 network)).clm.	USPAT	OR	ON	2020/11/05 11:51
S606	58,120	((configur\$6 control\$4) near2 (packet frame pdu)).clm.	USPAT	OR	ON	2020/11/05 11:51
S607	910	S605 near2 (configur\$6).clm.	USPAT	OR	ON	2020/11/05 11:51
S608	235,499	(commission\$4 setup set?up (set\$4 near2 up) accredit\$5 assign\$5).clm.	USPAT	OR	ON	2020/11/05 11:51
S609	370	S605 near10 S608	USPAT	OR	ON	2020/11/05 11:51
S610	57	S607 and S609	USPAT	OR	ON	2020/11/05 11:51
S611	9	S610 and S606	USPAT	OR	ON	2020/11/05 11:51

11/5/2020 2:07:05 PM

C:\Users\pmasur\Documents\2021\Quarter1\16_708189\16_708189.wsp

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 25, 2020	
				Application Number	16/708,189
				Filing Date	December 9, 2019
				First Named Inventor	Jeffrey P. Mathews
				Art Unit	2464
				Examiner Name	Masur, Paul H.
Sheet	1	of	1	Attorney Docket Number	104248-5365US

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	Document Number Number - Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document Country Code – Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
NON PATENT LITERATURE DOCUMENTS						
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published				
		Google Inc., International Preliminary Report on Patentability, PCT/US2015/060405, 16MAY2017, 7 pgs.				
		Google Inc., International Preliminary Report on Patentability, PCT/US2015/053291, 04APR2017, 14 pgs.				

Examiner Signature	/PAUL H MASUR/	Date Considered	11/05/2020
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C:\Users\mp073238\Documents\104248-5365US\List of
References Form 1449 (5365US).docx

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S561	104	((Jeffrey) near2 (Mathews)).INV.	US-PGPUB; USPAT	OR	ON	2020/11/05 11:30
S562	118	((Lee) near2 (Taylor)).INV.	US-PGPUB; USPAT	OR	ON	2020/11/05 11:30
S563	204	S561 S562	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:30
S564	15	S563 and (commiss\$7).clm.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:30
S565	751,811	wlan (wireless near2 (lan (local near2 area near2 network))) "802.11"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S566	17,262	S565 near2 (configur\$6 setup commiss\$7 provision\$4)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S567	68,320	H04W84/18.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S568	934	S566 and S567	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S569	409	S568 and (@pd<"20120411" or @ad<"20031230" or @prad<"20031230" or @rlad<"20031230" or @ptad<"20031230")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S570	7,684	H04W4/005,008.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2020/11/05 11:31

			DERWENT; IBM_TDB			
S571	5	S566 and S570	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S572	0	S571 and (@pd<"20120411" or @ad<"20031230" or @prad<"20031230" or @rlad<"20031230" or @ptad<"20031230")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S573	101,734	H04W84/12.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S574	3,366	H04W76/02.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S575	8	S566 and S574	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S576	5	S575 and (@pd<"20120411" or @ad<"20031230" or @prad<"20031230" or @rlad<"20031230" or @ptad<"20031230")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S577	1	S576 and (S567 S573)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S578	751,811	wlan (wireless near2 (lan (local near2 area near2 network))) "802.11"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S579	17,262	S578 near2 (configur\$6 setup commiss\$7 provision\$4)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31

S580	36,768	H04L41/0803,0806.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/11/05 11:31
S581	306	S579 and S580	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/11/05 11:31
S582	82	S581 and (@pd<"20120411" or @ad<"20031230" or @prad<"20031230" or @rlad<"20031230" or @ptad<"20031230")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:31
S583	9,951	H04B10/116.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/11/05 11:32
S584	157	S579 and S583	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/11/05 11:32
S585	2	S584 and (@pd<"20120411" or @ad<"20031230" or @prad<"20031230" or @rlad<"20031230" or @ptad<"20031230")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S586	6	S575 and (@pd<"20120411" or @ad<"20120411" or @prad<"20120411" or @rlad<"20120411" or @ptad<"20120411")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S587	162,756	H04W84/12,18.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S588	2,722	S580 and S587	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S589	51,208	H04W4/70.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2020/11/05 11:32

			DERWENT; IBM_TDB			
S590	152	S588 and S589	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S591	5	S590 and (@pd<"20120411" or @ad<"20120411" or @prad<"20120411" or @rlad<"20120411" or @ptad<"20120411")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S592	82,163	H04W4/80.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S593	239	S588 and S592	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S594	31	S593 and (@pd<"20120411" or @ad<"20120411" or @prad<"20120411" or @rlad<"20120411" or @ptad<"20120411")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S595	60,580	H04W76/10.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S596	364	S588 and S595	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S597	190	S596 and (@pd<"20120411" or @ad<"20120411" or @prad<"20120411" or @rlad<"20120411" or @ptad<"20120411")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S598	9,951	H04B10/116.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32

S599	28	S580 and S598	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S600	0	S599 and (@pd<"20120411" or @ad<"20120411" or @prad<"20120411" or @rlad<"20120411" or @ptad<"20120411")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S601	104	((Jeffrey) near2 (Mathews)).INV.	US-PGPUB; USPAT	OR	ON	2020/11/05 11:32
S602	118	((Lee) near2 (Taylor)).INV.	US-PGPUB; USPAT	OR	ON	2020/11/05 11:32
S603	204	S601 S602	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32
S604	4	S603 and (optical near2 sensor).clm.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/05 11:32

11/5/2020 2:07:58 PM

C:\Users\pmasur\Documents\2021\Quarter1\16_708189\16_708189.wsp

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	16/708,189
Filing Date	2019-12-09
First Named Inventor	Jeffrey P. Mathews
Title	Apparatus and Method for Seamless Commissioning of Wireless Devices
Art Unit	2464
Examiner Name	MASUR, PAUL H
Attorney Docket Number	030120-267960US

SIGNATURE of Applicant or Patent Practitioner

Signature	/ASKamlay/	Date (Optional)	2021-02-03
Name	Aaron S. Kamlay	Registration Number	58813
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☐

*Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Document Description: Power of Attorney

PTO/AIA/82B (07-13)

Approved for use through 11/30/2014. OMB 0651-0051

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☒ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

OR

16621

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☒ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name				
Address				
City	State	Zip		
Country				
Telephone	Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Google LLC

- ☐ Inventor or Joint Inventor (title not required below)
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- ☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature

Date (Optional) 9/22/2020

Name

Michael Lee

Title

Authorized Signatory of Google LLC

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Sonos Ex 1002, p. 191

Sonos v. Google, IPR2023-00806

DELEGATION OF AUTHORITY

The undersigned, Kent Walker (the "Grantor"), as Secretary of Google LLC, a Delaware limited liability company (the "Company"), having its principal place of business at 1600 Amphitheatre Parkway, Mountain View, CA 94043, hereby delegates to the person listed below the following authority on a non-exclusive basis, effective October 20, 2017:

Michael Lee

On behalf of the undersigned to sign as an Authorized Signatory:

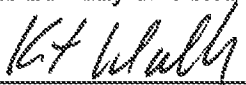
Any and all written instruments relating to or required in connection with patents or trade secrets domestically and internationally; and all agreements, including but not limited to licenses, settlements, pleadings, joint defense agreements, indemnity letters, engagement letters, conflict waivers, discovery responses, confidentiality agreements, powers of attorney, NDAs, FRE 408 letters, counsel/expert/vendor engagement agreements, counsel sharing agreements, indemnity demands and responses and common interest agreements (collectively, the "Authorized Documents"), relating to any patent-related proceedings, including but not limited to infringement, invalidity and nullity actions, patent office proceedings, protests, and inter partes and ex parte reexamination proceedings, to the extent that the execution and delivery of the Authorized Documents has been approved in accordance with the applicable policies and procedures of the Company.

This Delegation of Authority shall remain effective until the earlier of (i) this Delegation of Authority is revoked in writing by the Grantor or Company, (ii) the Authorized Signatory no longer serves in the same or substantially similar capacity at the Company, as determined by the Company, or (iii) the Authorized Signatory is no longer an employee of the Company.

Upon the occurrence of any of the foregoing events, this Delegation of Authority shall be automatically revoked without any action required by any of the parties hereof or the Company and shall become void and of no further effect.

Signed this 20th day of October, 2017.

By:


Kent Walker, Secretary of Google LLC

Electronic Acknowledgement Receipt	
EFS ID:	41822227
Application Number:	16708189
International Application Number:	
Confirmation Number:	7138
Title of Invention:	Apparatus and Method for Seamless Commissioning of Wireless Devices
First Named Inventor/Applicant Name:	Jeffrey P. Mathews
Customer Number:	82750
Filer:	Aaron Spencer Kamlay/Laura Drembus
Filer Authorized By:	Aaron Spencer Kamlay
Attorney Docket Number:	104248-5365-US
Receipt Date:	03-FEB-2021
Filing Date:	09-DEC-2019
Time Stamp:	11:32:46
Application Type:	Utility under 35 USC 111(a)

Payment information:					
Submitted with Payment			no		
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Assignee showing of ownership per 37 CFR 3.73	030120-267960US_373c.pdf	123885	no	3
			a96506d7dc3a7f208c7f57a39618741e4853b887		
Warnings:					

Information:					
2	Power of Attorney	030120-267960US_82A.pdf	153507	no	1
			4f28cf18723b0d4489f73635f50ddb23f5bdecaa		
Warnings:					
Information:					
3	Power of Attorney	Google-LLC_82B.pdf	1318729	no	2
			6e38052bd2f495a201af5abd4fb25d889ced3f16		
Warnings:					
Information:					
Total Files Size (in bytes):			1596121		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

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STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: MATHEWS, JEFFREY P. et al.Application No./Patent No.: 16/708,189 Filed/Issue Date: 2019-12-09Titled: APPARATUS AND METHOD FOR SEAMLESS COMMISSIONING OF WIRELESS DEVICESGOOGLE LLC, a CORPORATION

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is ____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: MATHEWS, JEFFREY P., et al. To: MOBIPLUG NETWORKS INC.The document was recorded in the United States Patent and Trademark Office at
Reel 030020, Frame 0015, or for which a copy thereof is attached.2. From: MOBIPLUG NETWORKS INC. To: REVOLV INC.The document was recorded in the United States Patent and Trademark Office at
Reel 030364, Frame 0158, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: REVOLV INC. To: NEST LABS, INC.

The document was recorded in the United States Patent and Trademark Office at
Reel 034254, Frame 0874, or for which a copy thereof is attached.

4. From: NEST LABS, INC. To: GOOGLE INC.

The document was recorded in the United States Patent and Trademark Office at
Reel 034266, Frame 0374, or for which a copy thereof is attached.

5. From: GOOGLE INC. To: GOOGLE LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 044334, Frame 0466, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/ASKamlay/

2021-02-03

Signature

Date

Aaron S. Kamlay

58813

Printed or Typed Name

Title or Registration Number

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/708,189	12/09/2019	Jeffrey P. Mathews	104248-5365-US

CONFIRMATION NO. 7138

POWER OF ATTORNEY NOTICE



82750
Morgan, Lewis & Bockius LLP (PA)(Google)
1400 Page Mill Road
Palo Alto, CA 94304-1124

Date Mailed: 02/05/2021

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/03/2021.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/vnguyen/



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/708,189	12/09/2019	Jeffrey P. Mathews	030120-267960US

CONFIRMATION NO. 7138

POA ACCEPTANCE LETTER



16621
Butzel Long / 030120
1909 K St.
Suite 500
Washington, DC 20006

Date Mailed: 02/05/2021

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/03/2021.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/vnguyen/

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	16/708,189	Filing Date	2019-12-09	Docket Number (if applicable)	030120-267960US	Art Unit	2464
First Named Inventor	Mathews			Examiner Name	Masur		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____☐ Other _____☒ Enclosed☐ Amendment/Reply☒ Information Disclosure Statement (IDS)☐ Affidavit(s)/ Declaration(s)☐ Other _____**MISCELLANEOUS**☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
(Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)☐ Other _____**FEES****The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to
Deposit Account No 122136**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED**☒ Patent Practitioner Signature

Applicant Signature

Signature of Registered U.S. Patent Practitioner			
Signature	/Shaun D. Gregory/	Date (YYYY-MM-DD)	2021-02-12
Name	Shaun D. Gregory	Registration Number	68498

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16708189
	Filing Date	2019-12-09
	First Named Inventor	Mathews
	Art Unit	2464
	Examiner Name	MASUR
	Attorney Docket Number	030120-267960US

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7752329		2010-07-06	MEENAN PATRICK	
If you wish to add additional U.S. Patent citation information please click the Add button.						Add

U.S.PATENT APPLICATION PUBLICATIONS						Remove
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20010016492		2001-08-23	GARASHI YOICHIRO	
	2	20100189096		2010-07-29	FLYNN JUDSON JOHN	
	3	20110299412		2011-12-08	DIAB WAEI	
	4	20110302634		2011-12-08	KARAOGUZ JEYHAN	
	5	20130132008		2013-05-23	BOREAN CLAUDIO	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		16708189
	Filing Date		2019-12-09
	First Named Inventor	Mathews	
	Art Unit	2464	
	Examiner Name	MASUR	
	Attorney Docket Number	030120-267960US	

6	20140270801	2014-09-18	SLEATOR MICHAEL
7	20150070585	2015-03-12	SHARIF-AHMADI SEYED M
8	20150220993	2015-08-06	BENTE ROBERT
9	20160091217	2016-03-31	VERBERKT MARK HENRICUS
10	20160248629	2016-08-25	ERDMANN BOZENA
11	20170223808	2017-08-03	BARNA ROSS
12	20180077778	2018-03-15	VANGEEL JURGEN MARIO

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FOREIGN PATENT DOCUMENTS								Remove
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							
If you wish to add additional Foreign Patent Document citation information please click the Add button								Add
NON-PATENT LITERATURE DOCUMENTS								Remove

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		16708189
	Filing Date		2019-12-09
	First Named Inventor	Mathews	
	Art Unit	2464	
	Examiner Name	MASUR	
	Attorney Docket Number	030120-267960US	

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1		

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16708189
Filing Date	2019-12-09
First Named Inventor	Mathews
Art Unit	2464
Examiner Name	MASUR
Attorney Docket Number	030120-267960US

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Shaun D. Gregory/	Date (YYYY-MM-DD)	2021-02-12
Name/Print	Shaun D. Gregory	Registration Number	68498

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
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Electronic Patent Application Fee Transmittal				
Application Number:		16708189		
Filing Date:		09-Dec-2019		
Title of Invention:		Apparatus and Method for Seamless Commissioning of Wireless Devices		
First Named Inventor/Applicant Name:		Jeffrey P. Mathews		
Filer:		Shaun Darrell Gregory/Laura Drembus		
Attorney Docket Number:		030120-267960US		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
RCE- 1ST REQUEST	1801	1	1360	1360
Total in USD (\$)				1360

Electronic Acknowledgement Receipt	
EFS ID:	41916616
Application Number:	16708189
International Application Number:	
Confirmation Number:	7138
Title of Invention:	Apparatus and Method for Seamless Commissioning of Wireless Devices
First Named Inventor/Applicant Name:	Jeffrey P. Mathews
Customer Number:	16621
Filer:	Shaun Darrell Gregory/Laura Drembus
Filer Authorized By:	Shaun Darrell Gregory
Attorney Docket Number:	030120-267960US
Receipt Date:	12-FEB-2021
Filing Date:	09-DEC-2019
Time Stamp:	16:55:48
Application Type:	Utility under 35 USC 111(a)

Payment information:	
Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 1360
RAM confirmation Number	E20212BG56363595
Deposit Account	122136
Authorized User	Laura Drembus
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)
37 CFR 1.20 (Post Issuance fees)
37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	030120-267960US_RCE.pdf	697650	no	3
			7dfdc58a5a8c161892271b9b072d96841d3f616		

Warnings:

Information:

2	Information Disclosure Statement (IDS) Form (SB08)	030120-267960US_PTO_IDS-Form.pdf	1053456	no	5
			225c3332203f7cdcbc5703a6f5b3426fc266191d		

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30650	no	2
			75a77229d047458c78cfbbe7cd13cc81d67bdf58		

Warnings:

Information:

Total Files Size (in bytes):			1781756
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

16621 7590 03/02/2021
Butzel Long / 030120
1909 K St.
Suite 500
Washington, DC 20006

EXAMINER

MASUR, PAUL H

ART UNIT

PAPER NUMBER

2464

DATE MAILED: 03/02/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/708,189	12/09/2019	Jeffrey P. Mathews	030120-267960US	7138

TITLE OF INVENTION: Apparatus and Method for Seamless Commissioning of Wireless Devices

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	06/02/2021

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

16621 7590 03/02/2021
Butzel Long / 030120
1909 K St.
Suite 500
Washington, DC 20006

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

_____ (Typed or printed name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/708,189	12/09/2019	Jeffrey P. Mathews	030120-267960US	7138

TITLE OF INVENTION: Apparatus and Method for Seamless Commissioning of Wireless Devices

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	06/02/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
MASUR, PAUL H	2464	709-222000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

1 _____

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/708,189	12/09/2019	Jeffrey P. Mathews	030120-267960US	7138
16621	7590	03/02/2021	EXAMINER	
Butzel Long / 030120			MASUR, PAUL H	
1909 K St.			ART UNIT	
Suite 500			PAPER NUMBER	
Washington, DC 20006			2464	

DATE MAILED: 03/02/2021

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 16/708,189	Applicant(s) Mathews et al.	
	Examiner PAUL H MASUR	Art Unit 2464	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/12/2021.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 2-21. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some *c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892) 2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>2/12/2021</u> . 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____. 4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	5. ☐ Examiner's Amendment/Comment 6. ☒ Examiner's Statement of Reasons for Allowance 7. ☐ Other _____.
--	--

/PAUL H MASUR/
Primary Examiner, Art Unit 2464

REASONS FOR ALLOWANCE

1. **Claims 2-21 are pending.**

Notice of Pre-AIA or AIA Status

2. **The present application is being examined under the pre-AIA first to invent provisions.**

Continued Examination Under 37 CFR 1.114

3. **A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935).** Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 2/12/2021 has been entered.

Information Disclosure Statement

4. **The information disclosure statement (IDS) submitted on 2/12/2021 was filed after the mailing date of the Notice of Allowance on 2/12/2021.** The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Allowable Subject Matter

5. **Claims 2-21 are allowed.**
6. **A pertinent reference, Kim et al. (see NPL cited on accompanying PTO-892), teaches a commissioning and deployment method for wireless sensor networks (see section III). Specifically, Figs. 1 and 4 show a commissioning procedure between an "out of the box" sensor and a commissioning server. However, the examiner notes that Kim et al. fail to teach at least commissioning via a wireless device and network configuration packets, including a security passphrase (as recited in the claim).**
7. **The following is an examiner's statement of reasons for allowance:**

The Examiner further directs the applicant to the Reasons for Allowance (mailed 11/16/2020) and the Examiner's discussion of the Prior Art of Record (see pgs. 5 and 6 of the Non-Final Rejection, mailed 8/20/2020).

Conclusion

8. **Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee.**

Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

9. **Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL H. MASUR whose telephone number is (571)270-7297.** The examiner can normally be reached on Monday to Friday, 6 AM to 3 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 16/708,189
Art Unit: 2464

Page 4

Date: 2/17/2021
/PAUL H MASUR/
Primary Examiner, Art Unit 2464

<i>Notice of References Cited</i>	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.	
	Examiner PAUL H MASUR	Art Unit 2464	Page 1 of 1

U.S. PATENT DOCUMENTS						
*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
	A					
	B					
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS						
*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS		
*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Kim et al., "A New Commissioning and Deployment Method for Wireless Sensor Networks", 11-16 Oct. 2009, IEEE, 2009 Third International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies, pgs. 232-237, DOI: 10.1109/UBICOMM.2009.63 (Year: 2009)
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Index of Claims</i> 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	08/17/2020	11/05/2020	02/17/2021						
	1	-	-	-						
1	2	✓	=	=						
2	3	✓	=	=						
3	4	✓	=	=						
4	5	✓	=	=						
5	6	✓	=	=						
6	7	✓	=	=						
7	8	✓	=	=						
8	9	✓	=	=						
9	10	✓	=	=						
10	11	✓	=	=						
11	12	✓	=	=						
12	13	✓	=	=						
13	14	✓	=	=						
14	15	✓	=	=						
15	16	✓	=	=						
16	17	✓	=	=						
17	18	✓	=	=						
18	19	✓	=	=						
19	20	✓	=	=						
20	21	✓	=	=						

<i>Search Notes</i> 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

CPC - Searched*		
Symbol	Date	Examiner
H04W84/18	08/14/2020	/P.H.M/
H04W4/005,008	08/14/2020	/P.H.M/
H04W84/12	08/14/2020	/P.H.M/
H04L41/0803,0806	08/14/2020	/P.H.M/
H04B10/116	08/14/2020	/P.H.M/
H04W84/12, 18	08/14/2020	/P.H.M/
H04W4/70	08/14/2020	/P.H.M/
H04W4/80	08/14/2020	/P.H.M/
H04W76/10	08/14/2020	/P.H.M/
ABOVE - UPDATED	11/05/2020	/P.H.M/
ABOVE - UPDATED	02/17/2021	/P.H.M/

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/P.H.M/ Primary Examiner, Art Unit 2464	
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<i>Search Notes</i> 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

Search Notes		
Search Notes	Date	Examiner
Considered file wrapper history of patent family	08/14/2020	/P.H.M/
Inventor name search	08/14/2020	/P.H.M/
Considered IDS documents	08/14/2020	/P.H.M/
Text and and classification search	08/14/2020	/P.H.M/
CPC subgroups - limited by text	08/14/2020	/P.H.M/
Databases Used: uspat, us-pgpub, fprs, epo, jpo, derwent, ibm_tdb	08/14/2020	/P.H.M/
Ip.com (NPL & Patent search) - see attached	08/17/2020	/P.H.M/
Considered applicant's submitted amendment	11/05/2020	/P.H.M/
Updated inventor name search	11/05/2020	/P.H.M/
Updated text and classification search	11/05/2020	/P.H.M/
NPL Search (Google Patents) - see attached	11/05/2020	/P.H.M/
Interference search - see attached	11/05/2020	/P.H.M/
Considered IDS documents	02/17/2021	/P.H.M/
Updated inventor name search	02/17/2021	/P.H.M/
Updated text and classification search	02/17/2021	/P.H.M/
NPL Search (IEEE) - see attached	02/17/2021	/P.H.M/
Interference search - see attached	02/17/2021	/P.H.M/

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
H04L	41/ALL	11/05/2020	/P.H.M/
ABOVE	UPDATED	02/17/2021	/P.H.M/

/P.H.M/ Primary Examiner, Art Unit 2464	
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Issue Classification 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

CPC						
Symbol					Type	Version
H04L	/	41	/	0806	F	2013-01-01
H04W	/	4	/	70	I	2018-02-01
H04W	/	76	/	10	I	2018-02-01
H04W	/	4	/	80	I	2018-02-01
H04W	/	84	/	18	I	2013-01-01
H04B	/	10	/	116	I	2013-01-01
H04W	/	84	/	12	A	2013-01-01

CPC Combination Sets				
Symbol		Type	Set	Ranking
	/			

NONE	Total Claims Allowed:	
(Assistant Examiner)	(Date)	20
/PAUL H MASUR/ Primary Examiner, Art Unit 2464	17 February 2021	O.G. Print Claim(s)
(Primary Examiner)	(Date)	1

Issue Classification 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

INTERNATIONAL CLASSIFICATION					
CLAIMED					
H04L	/	12	/	24	
H04W	/	76	/	10	
H04W	/	4	/	80	
NON-CLAIMED					
	/		/		

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/PAUL H MASUR/ Primary Examiner, Art Unit 2464 (Primary Examiner)	17 February 2021 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 5

Issue Classification 	Application/Control No. 16/708,189	Applicant(s)/Patent Under Reexamination Mathews et al.
	Examiner PAUL H MASUR	Art Unit 2464

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	9	10	18	19										
1	2	10	11	19	20										
2	3	11	12	20	21										
3	4	12	13												
4	5	13	14												
5	6	14	15												
6	7	15	16												
7	8	16	17												
8	9	17	18												

NONE	Total Claims Allowed:	
(Assistant Examiner)	(Date)	20
/PAUL H MASUR/ Primary Examiner, Art Unit 2464	17 February 2021	O.G. Print Claim(s) O.G. Print Figure
(Primary Examiner)	(Date)	1 5

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16708189
	Filing Date	2019-12-09
	First Named Inventor	Mathews
	Art Unit	2464
	Examiner Name	MASUR
	Attorney Docket Number	030120-267960US

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	Filing Date		2019-12-09	
	First Named Inventor	Mathews		
	Art Unit	2464		
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☐ A New Commissioning and Deployment Method for Wireless Sensor Networks

Bong Wan Kim; Seong-Soon Joo

2009 Third International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies

Year: 2009 | Conference Paper | Publisher: IEEE

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☐ A new channel allocation scheme for mobility support in IEEE 802.11 wireless networks

Youchan Jeon; Sangwon Park; Myeongyu Kim; Yeunwoong Kyung; Jinwoo Park

2012 Computing, Communications and Applications Conference

Year: 2012 | Conference Paper | Publisher: IEEE

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A new channel allocation scheme for mobility support in IEEE 802.11 wireless networks

Youchan Jeon; Sangwon Park; Myeongyu Kim; Yeunwoong Kyung; Jinwoo Park

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☐ Comparative Performance Analysis of WIMAX and WLAN with WPAN Coexistence in UL Band

Supatrasit Suansook; Supavadee Aramvith; Prasit Prapinmongkolkarn

Standards Dictionary Terms

- anechoic chamber
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 Supatrasit Suansook; Supavadee Aramvith; Prasit Prapinmongkolkarn
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 Yinghui Guo; Yun Liu; Zhenjiang Zhang; Fei Ding
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☐ **Effect of uncoordinated network interference on UWB energy detection
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- ☐ **Robust patch-antenna for wearable WLAN applications**
 Rizwan Masood; Syed Ali Mohsin
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- ☐ **A solution for industrial device commissioning along with the initial trust establishment**
 Apala Ray; Johan Åkerberg; Mikael Gidlund; Mats Björkman
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Usman Shahid; Shahida Qadir; Zeeshan Haider; Mubashar Yaseen; Abdul Mueed

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☐ A comparative analysis of compact antennae for WLAN applications

Mirza Altamash Baig; Muhammad Mubashir Ahmed Piracha

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Year: 2013 | Conference Paper | Publisher: IEEE

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P.F. Sammartino; D. Tarchi; G. Baldini

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☐ Supporting carrier grade services over wireless mesh networks: The approach of the European FP-7 STREP CARMEN [Very Large Projects]

A. Azcorra; T. Banniza; D. Chieng; J. Fitzpatrick; D. Von-Hugo; M.

Natkaniec; Sebastian Robitzsch; Frank Zdarsky

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Year: 2009 | Volume: 47, Issue: 4 | Magazine Article | Publisher: IEEE

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Gu Juping; Luo Laiwu; Mao Jingfeng; Cao Yinxiang; Yuan Yuan; Chen Kaian; Liu Xuanxuan
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Hongbo Guo; Gang Xie; Jing He
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Year: 2010 | Volume: 8 | Conference Paper | Publisher: IEEE

Abstract (358 Kb)

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S613	107	((Jeffrey) near2 (Mathews)).INV.	US-PGPUB; USPAT	OR	ON	2021/02/17 06:07
S614	119	((Lee) near2 (Taylor)).INV.	US-PGPUB; USPAT	OR	ON	2021/02/17 06:07
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S617	775,451	wlan (wireless near2 (lan (local near2 area near2 network))) "802.11"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:08
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S622	70,781	H04W84/18.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:09
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S624	3,324	H04W76/02.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:09
S625	8	S618 and S624	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:09
S626	5	S625 and (@pd<"20120411" or @ad<"20031230" or @prad<"20031230" or @rlad<"20031230" or @ptad<"20031230")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:09
S627	1	S626 and (S622 S623)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:09
S628	775,451	wlan (wireless near2 (lan (local near2 area near2 network))) "802.11"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:09
S629	17,688	S628 near2 (configur\$6 setup commiss\$7 provision\$4)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:09
S630	38,561	H04L41/0803,0806.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	OFF	2021/02/17 06:09

			DERWENT; IBM_TDB			
S631	318	S629 and S630	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2021/02/17 06:09
S632	82	S631 and (@pd<"20120411" or @ad<"20031230" or @prad<"20031230" or @rlad<"20031230" or @ptad<"20031230")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:09
S633	10,394	H04B10/116.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2021/02/17 06:09
S634	158	S629 and S633	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2021/02/17 06:09
S635	2	S634 and (@pd<"20120411" or @ad<"20031230" or @prad<"20031230" or @rlad<"20031230" or @ptad<"20031230")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:09
S636	6	S625 and (@pd<"20120411" or @ad<"20120411" or @prad<"20120411" or @rlad<"20120411" or @ptad<"20120411")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:09
S637	169,187	H04W84/12,18.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:10
S638	2,833	S630 and S637	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:10
S639	55,032	H04W4/70.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:10

S640	170	S638 and S639	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:10
S641	5	S640 and (@pd<"20120411" or @ad<"20120411" or @prad<"20120411" or @rlad<"20120411" or @ptad<"20120411")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:10
S642	87,874	H04W4/80.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:10
S643	261	S638 and S642	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:10
S644	31	S643 and (@pd<"20120411" or @ad<"20120411" or @prad<"20120411" or @rlad<"20120411" or @ptad<"20120411")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:10
S645	62,936	H04W76/10.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:10
S646	374	S638 and S645	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:10
S647	190	S646 and (@pd<"20120411" or @ad<"20120411" or @prad<"20120411" or @rlad<"20120411" or @ptad<"20120411")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:10
S648	10,394	H04B10/116.cpc.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:11
S649	29	S630 and S648	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2021/02/17 06:11

			DERWENT; IBM_TDB			
S650: 0		S649 and (@pd<"20120411" or @ad<"20120411" or @prad<"20120411" or @rlad<"20120411" or @ptad<"20120411")	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/02/17 06:11

2/17/2021 9:30:53 AM

C:\Users\pmasur\Documents\2021\Quarter2\16_708189\16_708189.wsp

EAST Search History

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S651	12,929	(wlan (wireless near2 lan) (wireless near2 local near2 area near2 network)).clm.	USPAT	OR	ON	2021/02/17 06:11
S652	59,468	((configur\$6 control\$4) near2 (packet frame pdu)).clm.	USPAT	OR	ON	2021/02/17 06:11
S653	938	S651 near2 (configur\$6).clm.	USPAT	OR	ON	2021/02/17 06:11
S654	239,901	(commission\$4 setup set?up (set\$4 near2 up) accredit\$5 assign\$5).clm.	USPAT	OR	ON	2021/02/17 06:11
S655	372	S651 near10 S654	USPAT	OR	ON	2021/02/17 06:11
S656	58	S653 and S655	USPAT	OR	ON	2021/02/17 06:11
S657	9	S656 and S652	USPAT	OR	ON	2021/02/17 06:11

2/17/2021 9:31:06 AM

C:\Users\pmasur\Documents\2021\Quarter2\16_708189\16_708189.wsp

Document Description: Issue Fee Payment (PTO-85B)

Issue Fee Transmittal Form

Application Number	Filing Date	First Named Inventor	Atty. Docket No.	Confirmation No.
16708189	09-Dec-2019	Jeffrey Mathews	030120-267960US	7138

TITLE OF INVENTION :

Apparatus and Method for Seamless Commissioning of Wireless Devices

Entity Status	Application Type	Art Unit	Class - Subclass	EXAMINER
Regular Undiscounted	Utility under 35 USC 111(a)	2464	222000	PAUL MASUR
Issue Fee Due	Publication Due	Total Fee(s) Due	Date Due	Prev. Paid Fee
\$1200	\$0	\$1200	02-Jun-2021	\$0

1.Change of Correspondence Address and/or Indication Of Fee Address (37 CFR 1.33 & 1.363)

Current Correspondence Address:	Current Indicated Fee Address :
16621 Butzel Long / 030120 1909 K St. Suite 500 Washington DC 20006 UNITED STATES 202 454 2800 ~~docket@butzel.com~~	
☐ Change of correspondence address requested, system generated AIA/122-EFS form attached	☐ Fee Address indication requested, system generated SB/47-EFS form attached

2.Entity Status

Change in Entity Status

- ☐ Applicant certifying micro entity status; system generated Micro Entity certification form attached. See 37 CFR 1.29.
Note: Absent a valid certification of micro entity status, issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
If this box is checked, you will be prompted to choose a micro entity status on the gross income basis (37 CFR 1.29(a)) or the institution of higher education basis (37 CFR 1.29(d)), and make the applicable certification online.
- ☐ Applicant asserting small entity status. See 37 CFR 1.27.
Note: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ☒ Applicant changing to regular undiscounted fee status.
Note: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

Document Description: Issue Fee Payment (PTO-85B)

3.The Following Fee(s) Are Submitted:

☒ Issue Fee

☐ I authorize USPTO to apply my previously paid issue fee to the current fees due

☐ Publication Fee

☐ The Director is hereby authorized to apply my previously paid issue fee to the current fee due and to charge deficient fees to Deposit Account Number _____

☐ Advance Order - # of copies _____

☒ If in **addition** to the payment of the issue fee amount submitted with this form, there are any discrepancies in any amount(s) due, the Director is authorized to charge any deficiency, or credit any overpayment, to Deposit Account Number 122136.
The **issue fee must be submitted** with this form. **If payment of the issue fee does not accompany this form, checking this box and providing a deposit account number will NOT be effective to satisfy full payment of the fee(s) due.**

4.Firm and/or Attorney Names To Be Printed

NOTE: If no name is listed, no name will be printed
For printing on the patent front page, list to be displayed as entered

1. Butzel.Long

2.

3.

5.Assignee Name(s) and Residence Data To Be Printed

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

Name	City	State	Country	Category
Google LLC	Mountain View	CALIFORNIA	united states	corporation

6.Signature

I certify, in accordance with 37 CFR 1.4(d)(4) that I am an attorney or agent registered to practice before the Patent and Trademark Office who has filed and has been granted power of attorney in this application. I also certify that this Fee(s) Transmittal form is being transmitted to the USPTO via EFS-WEB on the date indicated below.

Signature	/Shaun D. Gregory/	Date	06-01-2021
Name	Shaun Darrell Gregory	Registration Number	68498

Electronic Patent Application Fee Transmittal				
Application Number:		16708189		
Filing Date:		09-Dec-2019		
Title of Invention:		Apparatus and Method for Seamless Commissioning of Wireless Devices		
First Named Inventor/Applicant Name:		Jeffrey P. Mathews		
Filer:		Shaun Darrell Gregory/Laura Drembus		
Attorney Docket Number:		030120-267960US		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY APPL ISSUE FEE	1501	1	1200	1200
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1200

Electronic Acknowledgement Receipt	
EFS ID:	42859428
Application Number:	16708189
International Application Number:	
Confirmation Number:	7138
Title of Invention:	Apparatus and Method for Seamless Commissioning of Wireless Devices
First Named Inventor/Applicant Name:	Jeffrey P. Mathews
Customer Number:	16621
Filer:	Shaun Darrell Gregory/Laura Drembus
Filer Authorized By:	Shaun Darrell Gregory
Attorney Docket Number:	030120-267960US
Receipt Date:	01-JUN-2021
Filing Date:	09-DEC-2019
Time Stamp:	09:49:35
Application Type:	Utility under 35 USC 111(a)

Payment information:	
Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 1200
RAM confirmation Number	E202161049313051
Deposit Account	122136
Authorized User	Laura Drembus
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.20 (Post Issuance fees) 37 CFR 1.21 (Miscellaneous fees and charges)	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	Web85b.pdf	46008	no	2
			f6c631c83a21c5827703efae7490769ba66d56ba		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	32619	no	2
			447457641f32fec765ffd9b663d20d8817ab8bd4		
Warnings:					
Information:					
Total Files Size (in bytes):			78627		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/708,189	06/29/2021	11050615	030120-267960US	7138

16621 7590 06/09/2021
Butzel Long / 030120
1909 K St.
Suite 500
Washington, DC 20006

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Jeffrey P. Mathews, Longmont, CO;
GOOGLE LLC, Mountain View, CA;
Lee R. Taylor, Boulder, CO;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	16/708,189
Filing Date	12-09-2019
First Named Inventor	Jeffrey P. Mathews
Title	Apparatus and Method for Seamless Commissioning of Wireless Devices
Art Unit	2464
Examiner Name	MASUR, PAUL H
Attorney Docket Number	577800USCON5

SIGNATURE of Applicant or Patent Practitioner

Signature	/Michael K. Colby/	Date (Optional)	December 7, 2021
Name	Michael K. Colby	Registration Number	45,816
Title (if Applicant is a juristic entity)	Attorney of Record		
Applicant Name (if Applicant is a juristic entity)	Google LLC		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.



*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☒ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

OR

149118

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☒ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Google LLC

- ☐ Inventor or Joint Inventor (title not required below)
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- ☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature

Date (Optional)

12/11/2018

Name

Michael Lee

Title

Authorized Signatory of Google LLC

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: Google LLCApplication No./Patent No.: 11,050,615 Filed/Issue Date: 06-29-2021Titled: Apparatus and Method for Seamless Commissioning of Wireless DevicesGoogle LLC, a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: MATHEWS, JEFFREY P. et al. To: MOBIPLUG NETWORKS INC.The document was recorded in the United States Patent and Trademark Office at
Reel 055114, Frame 0749, or for which a copy thereof is attached.2. From: MOBIPLUG NETWORKS INC. To: REVOLV INC.The document was recorded in the United States Patent and Trademark Office at
Reel 055116, Frame 0738, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: REVOLV INC. To: NEST LABS, INC.

The document was recorded in the United States Patent and Trademark Office at
Reel 034254, Frame 0874, or for which a copy thereof is attached.

4. From: NEST LABS, INC. To: GOOGLE INC.

The document was recorded in the United States Patent and Trademark Office at
Reel 034266, Frame 0374, or for which a copy thereof is attached.

5. From: GOOGLE INC. To: GOOGLE LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 044334, Frame 0466, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Michael K. Colby/

Signature

Michael K. Colby

Printed or Typed Name

December 7, 2021

Date

45,816

Title or Registration Number

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	44456187
Application Number:	16708189
International Application Number:	
Confirmation Number:	7138
Title of Invention:	Apparatus and Method for Seamless Commissioning of Wireless Devices
First Named Inventor/Applicant Name:	Jeffrey P. Mathews
Customer Number:	16621
Filer:	Michael K. Colby/Sophie Ridgeway
Filer Authorized By:	Michael K. Colby
Attorney Docket Number:	030120-267960US
Receipt Date:	07-DEC-2021
Filing Date:	09-DEC-2019
Time Stamp:	16:26:58
Application Type:	Utility under 35 USC 111(a)

Payment information:					
Submitted with Payment			no		
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	577800USCON5POA.pdf	319857	no	2
			229c19bd88ba5c7970e5168cc6ba4cbcea5ad739		
Warnings:					

Information:					
2	Assignee showing of ownership per 37 CFR 3.73	577800USCON537CFR.pdf	123366	no	3
			d42c54a4d19acbb104b6fcc6231f1630374fe77c		
Warnings:					
Information:					
Total Files Size (in bytes):			443223		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/708,189	12/09/2019	Jeffrey P. Mathews	030120-267960US

CONFIRMATION NO. 7138

POWER OF ATTORNEY NOTICE



16621
Butzel Long / 030120
1909 K St.
Suite 500
Washington, DC 20006

Date Mailed: 12/13/2021

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 12/07/2021.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/tlulu/



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/708,189	12/09/2019	Jeffrey P. Mathews	577800USCON5

CONFIRMATION NO. 7138

POA ACCEPTANCE LETTER



149118
Colby Nipper / Google
291 East Shore Drive
Suite 200
Eagle, ID 83616

Date Mailed: 12/13/2021

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 12/07/2021.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/tlulu/